

THE COMMERCIAL CAR JOURNAL

Entered as Second-Class Matter at the Post-Office at Philadelphia, Pa.

1924 is STEWART'S Biggest Year



Profits to Dealers in Quality and Price Advantage

Dealers make money on Stewart trucks because they combine a decisive price advantage with the finest truck quality obtainable.

The Stewart offers what buyers want. That is what makes it a successful line from the dealer's standpoint also. The repeat sales which form a substantial proportion of Stewart business is the strongest acknowledgment that can be given of the superior values Stewart trucks provide. Scores of fleet owners say Stewarts outlast and out-perform far costlier trucks.

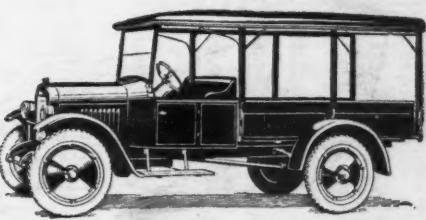
The Stewart 1 Ton Truck is a fast-selling leader that dealers find paves the way for the larger models. From the sale of the first truck many dealers have built up large fleets of Stewarts.

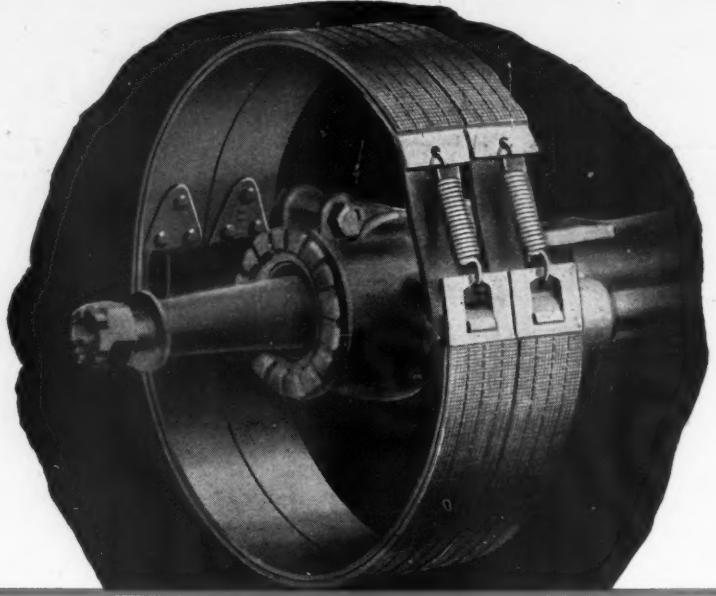
Every haulage requirement is met in the five models, from the 1 ton to the 4 ton size. And bodies are supplied for every business.

This will be one of the biggest years in the truck business. And Stewart for 11 years has been one of the leaders in the industry.

Do you want to share these profits? If so, write promptly to secure some of the choice territory now available.

Stewart
MOTOR TRUCKS
BUFFALO, NEW YORK





Bevel Drive Axles *Plus Compensating Internal Brakes*

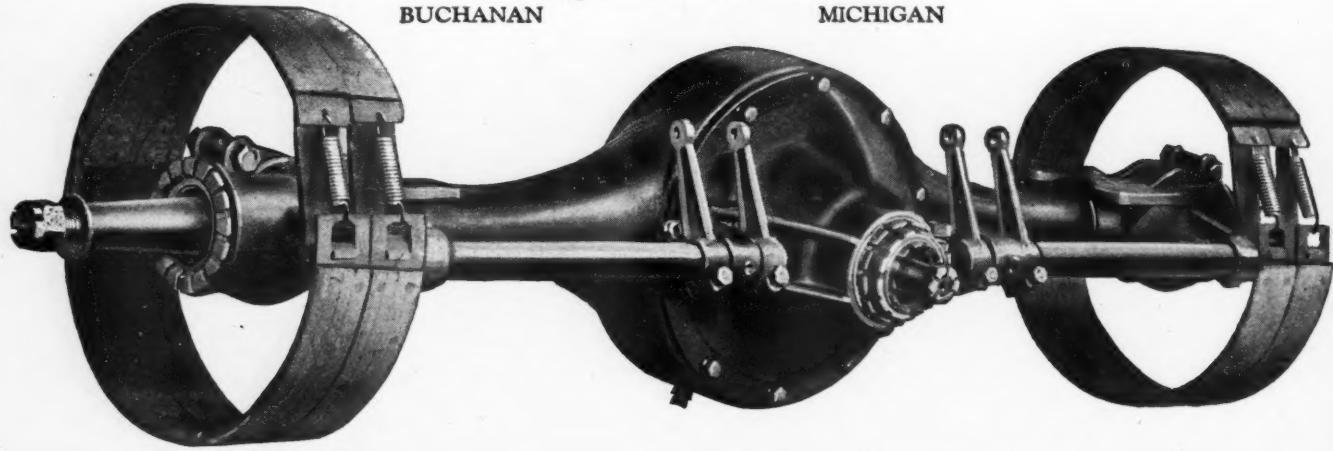
Equalization of pressure on the entire periphery of the brake drum is assured on Clark Bevel Axles by the use of compensating internal brakes:

—plus exceptional ease in removal for quick relining.

** Write for new
Bevel Axle Book*

*Electric Steel Castings
for automotive vehicles*

CLARK EQUIPMENT COMPANY
BUCHANAN MICHIGAN



CLARK AXLES



THE PUBLISHERS PERSONAL PAGE



“Motor Transport” to Become a Monthly Publication

MOTOR TRANSPORT with the issue of April 10, will become a monthly publication and will be published in Philadelphia by the Chilton Company, Chestnut and 56th Streets. As a semi-monthly it was published by the Class Journal Company in New York.

Editorially MOTOR TRANSPORT will continue its highly effective work as an operator's handbook. Helpful solutions of the problems of the fleet owners will be solved by offering the experience of those operators who have met and overcome the difficulties. Specific articles on the operation of motor busses and taxicabs will be included with those of successful freight handling by motor truck, and the scope of the publication will be increased at least to that extent.

The circulation of MOTOR TRANSPORT will be 5,000 guaranteed, starting with April, and will be increased as rapidly as its popularity and usefulness to the operators become recognized.



A Trouble Hard to Find

—a trouble that runs costs up quickly and exhausts the truck owner's patience, is cable defect. Baffling at times, it sends the average mechanic on a "wild-goose chase" for hours.

Knowledge of this fact brings a smile of pleasure to your customer's face when he sees Packard Cable on your truck.

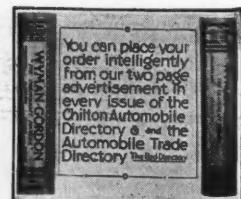
Whether you manufacture trucks, overhaul them for resale, or operate them yourself, Packard Cable should be a paramount consideration. It helps tremendously the sale of trucks and enables the owner to get full value out of his investment.

The difference in the cost of Packard Cable and other cables which you *hope* may be as good is not enough to make it worth-while to take a chance.

The fact that most manufacturers, repairmen and owners know this accounts for the dominating salability—and *salesmanship*—of Packard Cable. Nearly all jobbers carry Packard Cable, as well as thousands of dealers who are unwilling to gamble with the good-will of their trade by stocking doubtful brands.

Tell your Jobber to "make it *Packard*"

The Packard Electric Co.
Warren, Ohio



Packard Automotive Cable

The Standard For Over Twenty Years

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Mr. Engineer:—

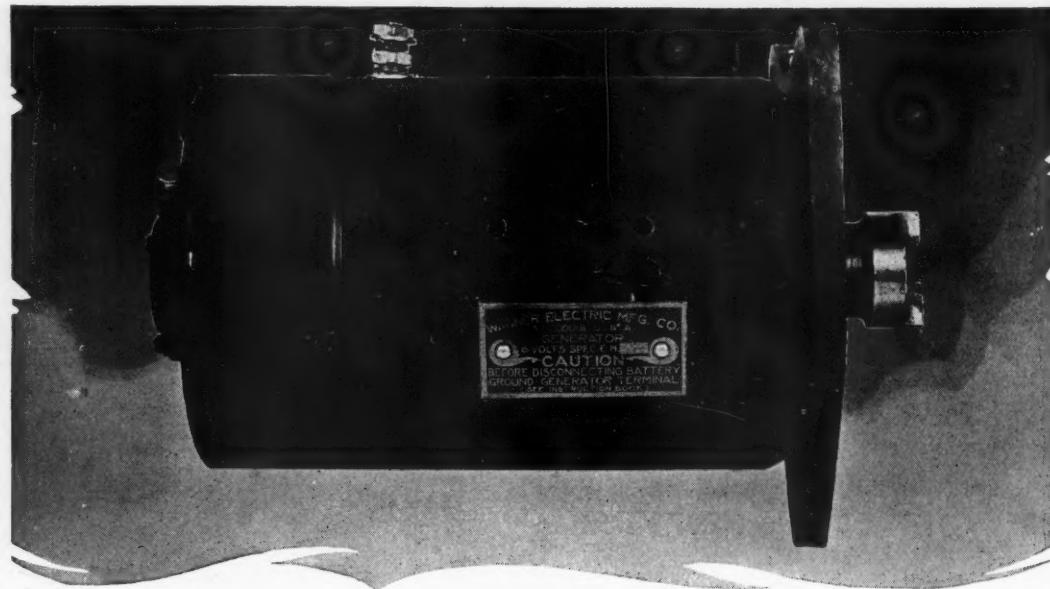
What design in a bearing has the most advantages for your problems?

Does not a bearing having capacity for both radial and thrust loads meet your requirements?

Bower design has incorporated thrust and radial carrying surfaces in the Bower Roller Bearing. These surfaces are separate and independent. Besides Bower Roller Bearings do not need adjustment. Bower Bearings never jam.

BOWER ROLLER BEARING COMPANY
DETROIT, MICHIGAN





Ball Bearings on Generators Protect Starting and Ignition Systems and Eliminate Noise

WHEN the generator on an automobile or truck fails to operate quietly or properly, the entire electrical system is affected and serious damage is also done to the batteries.

Skayef self-aligning ball bearings on starting, lighting and ignition generators prevent noise and the most common causes of trouble. The lubricant is kept where it belongs instead of leaking out and finding its way onto the commutator and windings, causing short-circuits. Dropped armatures, the cause of damaged windings, are eliminated for ball

bearings maintain the armature permanently on its original center. Furthermore very little attention is required as there are no bearing adjustments to make and lubricant is required only at infrequent intervals.

Because of their quiet, practically frictionless operation and maintained precision ball bearings best meet the exacting requirements of automotive service and are in extensive use on vital automotive parts as well as on accessories. Let us work with you in solving your problems.

THE SKAYEF BALL BEARING COMPANY

Supervised by **SKF** INDUSTRIES, INC., 165 Broadway, New York City

1126



INTERNATIONAL



The New Model 103—Built in a New Plant

Model 103, which supersedes Model 101, is a new truck of 10,000 pounds maximum capacity. It is built in the new motor truck plant of the International Harvester Company at Fort Wayne, Ind. This is the third plant to be added to the production units of the Company for building International motor trucks and is tangible evidence of the popularity of International construction and International service.

In the International line of dependable motor trucks, there is a size of truck and a style of special equipment to meet every hauling requirement. The International Speed Truck provides economical, fast delivery service desired in many lines of business while the heavy-duty models from 3,000 to

10,000 pounds, maximum capacity, are built for heavy work.

International motor trucks have earned their leading position by the years of service they have given, and the International Harvester organization has cooperated with owners by supplying a Free Inspection Service which is provided during the life of the truck. It is a nation-wide service, yet it is intimate and personal, for the 93 branch houses and thousands of dealers are close at hand when service is required.

An investment in International motor trucks is truly an investment in transportation value—it is an investment that should be studied carefully when new hauling equipment becomes necessary.

DEALERS' NOTE—Some territory is still open. Write for information.

INTERNATIONAL HARVESTER COMPANY
606 So. Michigan Ave. OF AMERICA (Incorporated) Chicago, Ill.

MOTOR TRUCKS



TRENTON HYDRAULIC *HOISTS AND BODIES FOR* FORD TRUCKS

**SIMPLE, EFFICIENT, WELL BUILT AND
REASONABLY PRICED**

The Trenton Hoist fits a Ford truck exactly and takes very little time to install.

Its hydraulic mechanism is very simple and dependable. The pump unit is bolted to the timer gear cover and driven from the time gear. It is controlled from the driver's seat by a clutch. The hydraulic ram is out of the way, entirely under the body. It takes up no needed space. Its maximum capacity is two tons.

The all-steel Model D bodies are electrically welded. They are equipped with automatic tail-gate trippers. The gates may be hinged at either top or bottom. They are high-grade bodies in every detail, made in 1, 1½ and 2 cubic yard models.

Write for price list, discounts and distributor territory.

Fitz Gibbon & Crisp, Inc.
Established 1849
Trenton, N. J.

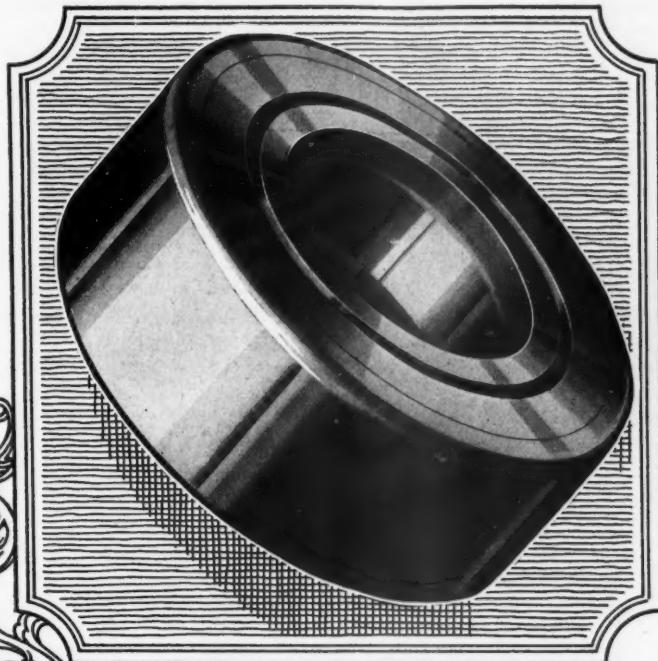
Distributors for Philadelphia and Vicinity: Philadelphia Body and Truck Equipment Co., 2123 Vine St., Philadelphia



MARCH 15, 1924

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New Departure Ball Bearings

Measuring the Life of a New Departure

The New Departure Service Department is probably one of the best-equipped and most efficient in the industry. Yet **one man** handles the whole job.

With a production of over 80,000 ball bearings per day, what better proof could there be of the fact that New Departure ball bearings last as long as the cars in which they are installed? Considerably over 99% of New Departures shipped are for use in new installations—not for replacement purposes.

The New Departure Manufacturing Company
BRISTOL, CONN.

Detroit

Chicago

“.... at every Vital Point —a little better....”

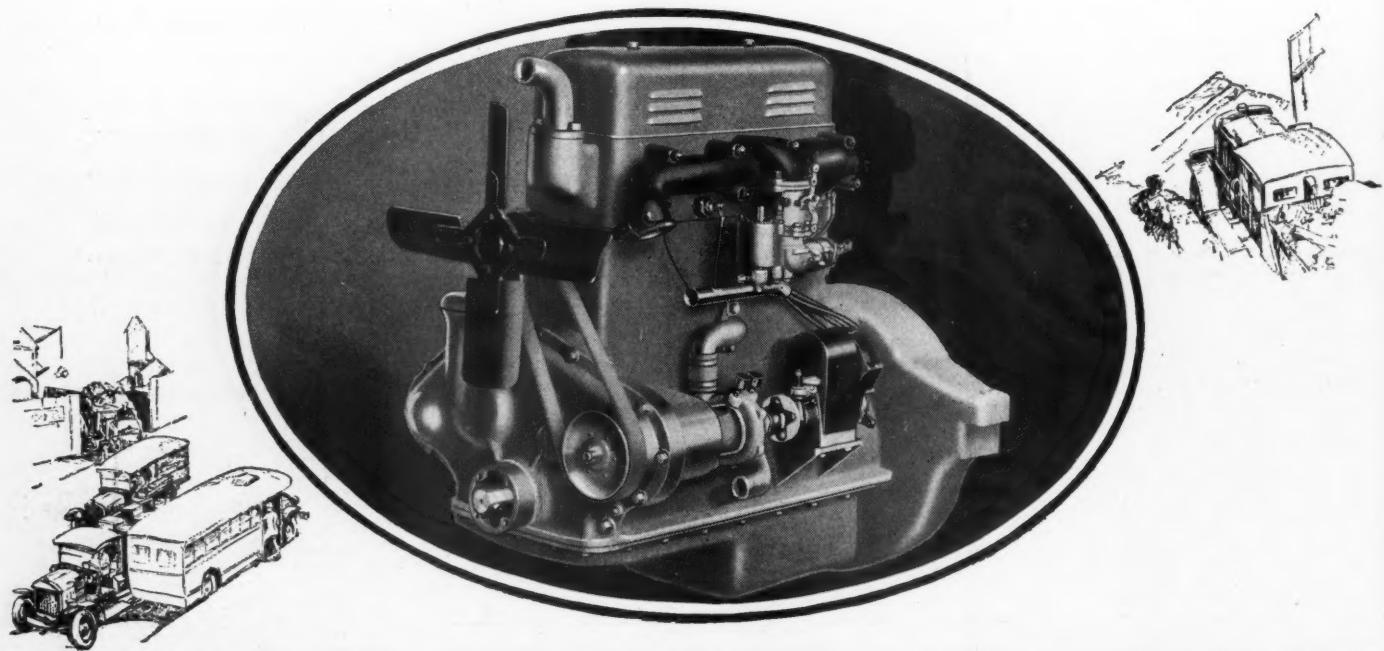
A LITTLE better in power—and in economy—and in trouble-free service. Those are Wisconsin characteristics—and the reasons lie in Wisconsin shop practice.

Wisconsin's policy of building only motors of sound design, held to standards a little better at every vital point, favors quality rather than quantity business—yet *delivery-on-schedule* is guaranteed.

But in return, this adherence to the ideal of “excellence first—then quantity,” has brought its rewards in nation-wide recognition of Wisconsin's utter dependability.

Wisconsin

Consistent



WISCONSIN MOTOR MFG. CO. MILWAUKEE, WISCONSIN

The Commercial Car Journal

VOLUME XXVII

PHILADELPHIA, MARCH 15, 1924

NUMBER 1

Turning the Spotlight on Boston

Chester I. Campbell
Veteran show manager, who is responsible for the success of this year's exhibit.



Mechanics' Hall
Gigantic building used for the Annual Boston Automobile Show. Capacity, 105,000 sq. ft. of floor space.

DURING the week following this writing the Boston Automobile Show will be in full swing. That this year's show will outclass all former events is a foregone conclusion, because the Boston Show is an institution. It is one of those affairs which is looked forward to by the dealers all over New England each year as a guide post to the business to be done throughout the remainder of the year.

In other words, the average New England dealer's fiscal year is from one Boston Show to the next one. The Boston Show is his business barometer. During the week of the show one will find all the dealers of the smaller towns in Boston. They come from all quarters of New England, to learn more about the cars and trucks they are selling and to get ideas from their brethren in the Hub. And in many cases they will show the big city dealer a few things about selling trucks—because last year New England had a good truck year. This year, it is predicted, will be even better.

The basis for this prediction is the general optimistic feeling prevailing among the New England wholesale and retail truck establishments. Of course, there are a few pessimists but their gloom is a reflection of their business methods to a great extent. That is to say, these men have not as yet got the right slant on sell-

ing trucks. They are still looking at the business from a competitive, "get-the-order-at-any-cost" viewpoint.

The majority of the dealers are confident that this year's business will be even better than last year's because general business conditions in New England are better. There is a better buying "atmosphere." The truck buyers are more receptive to the truck salesman and are showing a greater interest in trucks. The open winter has been very helpful with the result that much freight has been moved over the highways. Truck operators have had few idle trucks this winter which means greater than normal mileage and a few steps near a new truck.

Distributors are equally optimistic. Notwithstanding the general complaint that dealers are hard to obtain, Boston distributors seem to be making progress in this respect and some of those interviewed have made some exceptionally

good connections. It is rather pleasant to hear a distributor praising his dealers for it is generally the reverse with a heavy foot on the accelerator. If the open winter continues, the small town dealer will get away to a good start in selling.

There are some dealers in New England who have awakened to the fact that heavy purchases at high prices in the trade-in market are not profitable. These dealers are letting the other fellow get the order. The head of one factory branch stated that his star dealer was the one who turned his thumbs down on long prices for the used truck. "That man appraises them low and won't raise a nickel," said the distributor. "And he has plastered our truck all over his territory which proves there is something besides a high buy in selling trucks."

It is the general consensus of opinion that last year's records would go a glimmering in 1924. So it is advisable at this

	1921	1922	1923	Per Cent Gain Over 1922	Exclusive Truck Dealers
Rhode Island	9,897	13,011	23,637	76	12
Massachusetts	55,561	70,999	83,505	25.9	72
Connecticut	26,300	26,046	34,900	23.9	42
Vermont	3,487	2,640	6,988	23.4	6
New Hampshire	5,440	6,136	3,356	20.3	2
Maine	9,937	13,842	15,792	15.5	19
	110,622	132,674	168,178		*153

*Chilton Trade List of Sept., 1923.

point to scan just what the New England truck dealers did and make a few comparisons with other sections of the country. The table on previous page, shows that there were 110,622 trucks registered in the New England States in 1921 and 132,674 in 1922, a gain of 20 per cent.

During 1923 New England absorbed 35,504 trucks, a gain of nearly 27 per cent over the previous year. There was registered on Dec. 31, 1923, 168,178 trucks and the clerks up at the state house are still entering more. New England sold nearly 10 per cent of the trucks made in 1923 considering that about 380,000 were produced.

It may not be generally known but Rhode Island, the smallest state in the Union, led the country in per cent gained in registration over 1922. It nearly doubled its quota in trucks for 1922. This state, which can be crossed at its longest distance in an hour by a car, absorbed 23,637 trucks in 1923, gaining 76 per cent over 1922. The next state in order is Alabama with 40 per cent. Hats off to Little Rhody!

Massachusetts, Connecticut, New Hampshire and Vermont were among the States which went over the 23 per cent increase mark. In order Rhode Island is first, Massachusetts nineteenth, Connecticut twenty-sixth, New Hampshire twenty-seventh, Vermont thirty-fourth and Maine forty-third. It may be contended that Rhode Island being small affords a greater opportunity to cover the territory but although such a factor might be considered it will not account for an increase of 76 per cent. Neither did the State experience any great business boom. It was done by intensive selling methods.

Unless one is familiar with the territory New Hampshire and Vermont appear to be slow to accept the truck. Such is not the case for these states cannot at present absorb many trucks, but both states present good opportunities for the future. Maine, while a large state insofar as area is concerned, is handicapped by poor roads and insufficient development of its natural resources. In time Maine and Vermont will need many trucks.

In summing up, it may be deducted that New England truck dealers will have a good year unless there is some decided change in general business conditions. The distances between manufacturing centers are ideal for the motor truck and the manufacturer is fast learning of the economics of motor highway transportation. It is not uncommon to note many trucks on the highways bearing the same owner's name engaged in contract hauling of New England products. This has afforded a good market for the heavy type of truck. The light or delivery type is increasing in sales as it is everywhere. Although the bus business has not developed as fast in New England, generally speaking, as elsewhere, those who are in touch with the bus situation predict a big increase in bus sales in the New England territory.

As in former years the truck exhibits will again be housed in the basement of the Mechanics Building. About 30 makes of trucks and tractors will be shown. The following is a summary of the exhibits of

those dealers and local representatives who have definitely decided what models they will show.

Garford Motor Truck Company, Inc., will exhibit the following: Model 51D with a specially constructed Superior 25-passenger DeLuxe body; model 51D with superior 25-passenger Pay-enter body; model 51D furniture van job; model 25BL open body of the Boston Transcript for newspaper work and model 70HLS with a special furniture van body.

Brown Body Corporation will show a White chassis with bodies built by this company and of which there will be three. One DeLuxe body with individual wicker chair equipment, one Suburban Parlor Car Coach with individual swivel parlor chairs and standard pay-enter type bus body.

Mack Motor Truck Company will exhibit a 2½ ton dual reduction chassis with all working parts of the engine, transmission and rear end exposed. The latest model Mack bus will be featured, also a standard 5 ton model AC chain drive chassis, a 2½ ton model AB chain drive chassis equipped with Wood hydraulic hoist and combination dump body and a 2½ ton combination chemical and pumping engine. All of these jobs will be equipped with an air filter, air heater and radiator shutter which is operated from the driver's seat.

Ford Motor Company will display a Ford truck complete with body and cab.

Walker Vehicle Company will exhibit two models—a five ton truck sold to H. P. Hood & Sons with an ice cream body and model 12 chassis, a light delivery type model. The Hood truck is to be equipped with an ice cream body built by Groethe of Woburn.

Maxim Motor Company will show one model MHL six cylinder City Service Ladder Truck with a chemical tank. Also a model M3 750-gallon Triple Combination Fire Truck and a 400-gallon pumping engine with hose body and booster water tank arrangement.

Eastern Tractors Company, Inc., will exhibit the following tractors: Model F and W Cletrac "Tank Type" tractors; the Best Thirty and Sixty "Tracklayer" tractors.

Stewart Automobile Corporation will show models 16, 9 and 7 and the new model M17.

International Harvester Co. of America will show three models, S, 43 and 63.

American-LaFrance Fire Engine Co. will show type 75 pump and truck combination; 5 ton dump model 5R, 3½ ton chassis model 3R; 2½ ton chassis model 2R and two 2½ ton chassis with van bodies.

J. W. Maguire Co., Pierce-Arrow Branch, will show Z bus DeLuxe body 21 passengers, WD furniture van chassis 16 ft. 6 in., RF dump 14 ft. chassis, XA light duty truck chassis 16 ft.

New England Cab Sales Agency, Inc., will show standard cab job, 1 ton model T truck with armored bank body bullet proof glass, etc., coach chassis, 29 passenger capacity bus.

E. A. Sontag, district representative, Graham Brothers trucks, will show the Graham chassis, with the following bodies:

Panel job, No. 108; stake job, 12 ft. body; canopy express, dump job and a ¾ ton Dodge Brothers panel job.

Linscott Motor Company's exhibit will comprise the new Reo bus chassis and the new light delivery speed wagon, a completely equipped Reo Bungalow, the Reo taxicab and ten different body styles mounted on the speed wagon chassis. The new Parcel Delivery Speed Wagon and the bus will be the two newest features in this company's exhibit.

The Kelly-Springfield Motor Truck Co., Boston branch, will exhibit three models: K-33, 1½ ton; K-75, 2½ ton; K-41, 3½ ton.

Commerce Truck Company of New England, Inc., will exhibit the following: Commerce Truck, model 25, 2½ ton, 176 in. wheelbase; United model 50, 2½ ton, 176 in. wheelbase; United, model 30, 1½ ton, 148 in. wheelbase, and United, model 15, 1 ton, 128 in. wheelbase.

Wachusett Motors, Inc., will exhibit a new model, a 1½-2 ton speed truck equipped with Continental 6 cylinder engine and 36 x 6 front and 36 x 8 rear pneumatic tires. A standard 2½ ton chassis equipped with Continental 4 cylinder engine 4½ x 5½. This truck will be equipped with 36 x 5 semi-pneumatic tires on front and 36 x 6 solid tires on the rear. Specifications include 7 in. channel section frame, front springs, and 3½ in. rear springs. Both models equipped with Ross steering gears, Brown-Lipe transmissions, Timken axles and Smith wheels.

Federal Truck Co. of Boston, Inc., will have a very large exhibit displaying the full line of Federal chassis from the new ¾ Federal Knight up to the 6 ton heavy duty dump truck. The exhibit will consist of the ¾ Knight stripped chassis, the 1 ton chassis with a Bottlers' type of body, 25 passenger six cylinder bus chassis fully equipped with a Kuhlman type of body, a long 5 ton truck suitable for handling newspaper rolls, and a 6 ton dump equipped with a Wood Hydraulic Hoist and a 5 yard body.

Gramm-Bernstein Motor Truck Co., Boston Branch, will exhibit one 5 ton chassis; one 3½ ton model equipped with Wood Underbody hoist and body; one Contractor's Special and a model 10 Speed Truck. A special job, duplicate of which was recently sold to the City of Lynn, will be featured.

Eastern Electric Vehicle Co. will exhibit a ¾ ton C-T electric with laundry body and a 2 ton C-T chassis.

Unlike the two national shows the Boston Show is the leading dealer's show of the year. The exhibits are all staged by the local representatives and much local business is done as a direct result of this show. Each year in the past a good sales record has been made at the show and this year will be no exception.

The Historical Side of the Boston Show

Of the thousands of people who will attend the Boston Automobile Show there will doubtless be many who will recall the first show that the Boston dealers held twenty-one years ago this month.

At that time, in 1903, the automobile industry was very much in its infancy, but it was a lusty youngster and gave promise

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of great attainments, though nobody expected that in a little more than two decades it would have become first in value of manufactured products among all of America's great industries.

The first show conducted by the dealers themselves, that in Symphony Hall in March of 1903, was a real automobile show, according to Mr. Campbell, and it was very much along the same lines of the shows of today though by no means as elaborate. Trick driving and such things were eliminated and the cars were arranged in booths in the hall, while outside there were demonstrating cars for those who were favored with a ride.

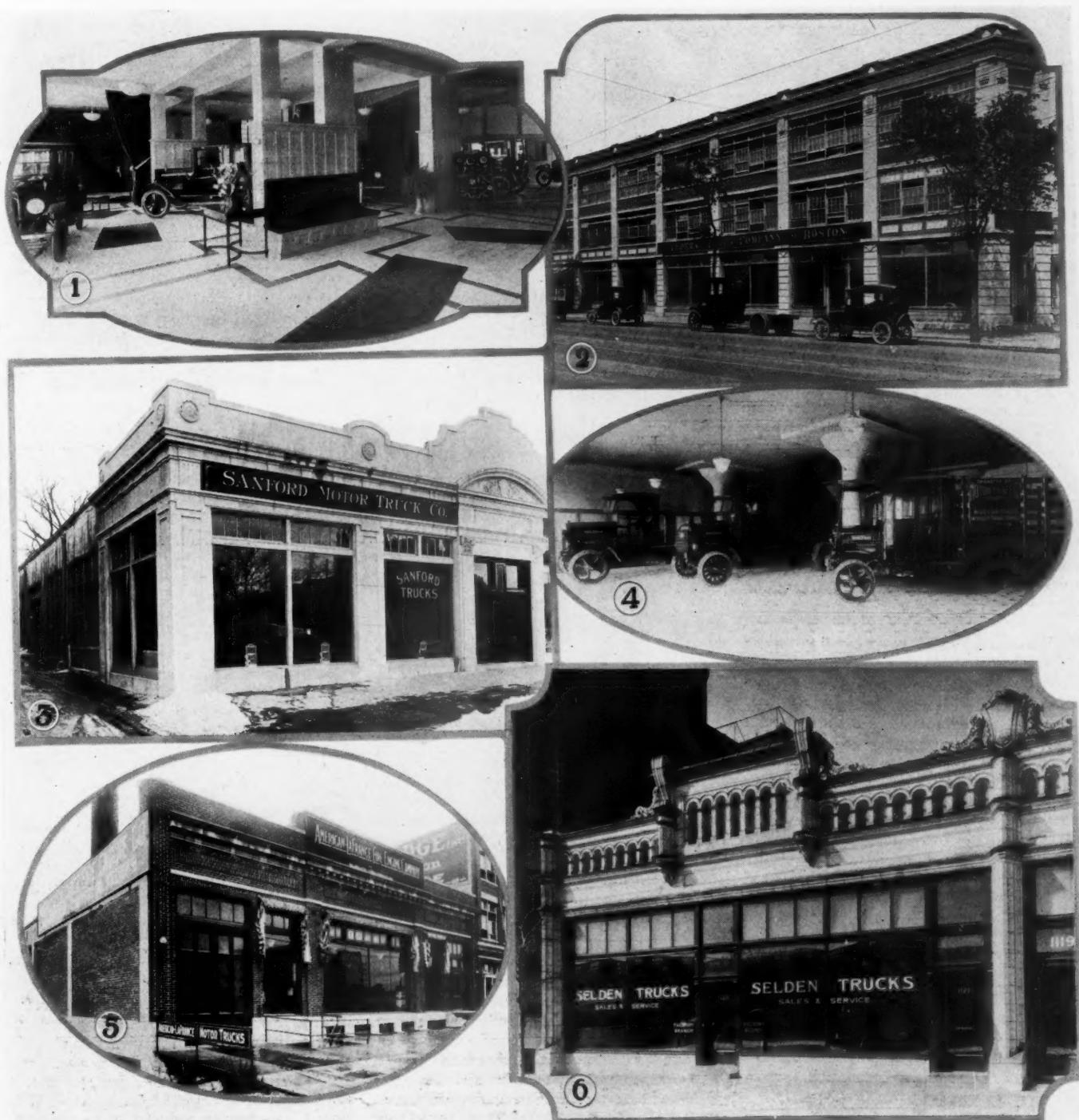
No less than forty-four different makes

of cars were exhibited in the pioneer show of the Boston dealers, which included practically all there were built at that time and some imported makes. And not a few of the cars that were then exhibited were the ancestors of cars that will occupy prominent places in the 1924 show.

The Pierce-Arrow, then spoken of as "new to Boston" was displayed, also the Oldsmobile, the Winton, Cadillac, Franklin, Peerless, Locomobile, Stevens-Duryea, Packard, and Stanley. The White Company, which now makes only trucks, showed its steamers in the 1903 exhibit. Then there was the Rambler, the grandfather of the present Nash, the Autocar, product of the same company which now

produces the Autocar truck, and such famous foreign cars as the Renault, De-Dion, Clement and Darracq.

The majority of cars displayed in that early show have, however, passed out of existence, though they had their periods of great popularity. Of such were the Knox, the Hartford, the Orient, and the Pope-Robinson, which gave promise of making New England the leader in the manufacture of automobiles. The Thomas, Toledo, St. Louis, Mobile, Crestmobile, Northern, Baker, Yale and Searchmont were among the other names of cars now forgotten or never heard of by the host of car owners of New England, now almost a million in number.



A Few Examples of Boston's Good Looking Showrooms and Service Stations

1. Sills-Chevrolet Salesroom.
2. Federal Sales and Service Station.
3. Sanford Sales and Service Station.
4. Interior of American-LaFrance Salesroom.
5. American-LaFrance Fire Engine Co.
6. New Selden Sales and Service Station.

Plans Nearing Completion for Big Service Convention and Maintenance Equipment Show

National Automotive Service Convention and Automotive Maintenance Equipment Show Promises to be a Record-Breaking Event—Detroit, May 19th to 23d

By C. P. SHATTUCK

To achieve big things requires time and conscientious effort. Progress appears to be slow when the yardstick is applied to the movement for better service, but after years of intensive merchandising the Service Committee of the National Automobile Chamber of Commerce has sold the leading trade organizations on the value of quality service in marketing the manufacturers' wares.

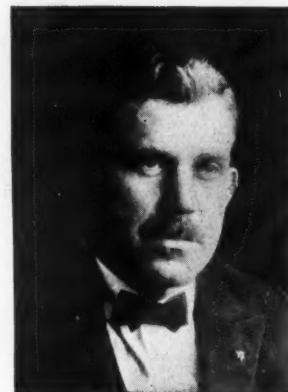
It has taken time and hard work to convince the factory executives that the semi-annual service meetings really produced. It has been difficult to convince the factory that the time spent by its service manager at these meetings was really profitable from a sales standpoint. But as the service movement progressed the value of these service meetings, was much more appreciated by the factory, until the greater number are now represented at the service conventions. However, there are a few factories, especially in the truck end, who still deem the parts business more advantageous than sales accruing from satisfied owners.

Reviewing the records of the service conventions will show that the service enthusiasts have had a tough uphill fight to obtain official recognition. But it has been granted and in May the culmination of the efforts will be manifested when the first National Automotive Service Convention and Automotive Maintenance Equipment Show will be held in Detroit.

Six of the leading automotive organizations will combine to put these two

important events over, namely the N. A. C. C., the Society of Automotive Engineers, the Motor and Accessory Manufacturers' Association, the National Automobile Dealers' Association, the Service Equipment Associates and the Automotive Equipment Association. Representatives of these organizations have places on the various committees and will give the events active co-operation. This assures the success of the first really national service meeting.

The service committee of the N.A.C.C. has been active for some time in bringing about a combination meeting and a real show of service station equipment. The committee met in February and a repre-



C. A. Vane



F. A. Bonham

effort will be made to avoid unnecessary duplication of equipment and to provide a representative exhibition of service station equipment. Supplies and accessories will not be exhibited. A feature of the show will be actual demonstrations of equipment so that the time, labor and profit possibilities may be observed.

Invitations to both the service meetings and the show will be extended through the various trade associations. The various branches in service will be considered, namely, factory service heads, those of the dealers and distributors, independent service stations, garages, repair shops, both mechanical and electrical. Tire service will be included. Invitations will be extended to service heads of fleet owners, both truck and passenger car.

In order that the show will not detract from the service meetings, or vice versa, the show will be closed during the meetings. The show will open from 9:30 in the morning until 2 in the afternoon each day, and from 6 to 10 at night. On the 23rd the show will be open all day, as there are no sessions.

Arrangements will be made whereby the visitors at both the show and convention sessions may obtain their meals in the General Motors Building so that one may visit the show in the morning, secure his lunch and then attend the meetings. Similarly after the meetings refreshments may be obtained if one desires to visit the show in the evening. This avoids the trip down town, also conserves time.



Coker F. Clarkson

sentative of the S. A. E. was present. The dates selected are May 19 to 22 inclusive for the service meetings, and May 19 to 23 inclusive, for the equipment show.

The exhibition halls of the General Motors Building have been secured for the show. Admission will be by invitation to the trade. Invitations will not be extended to the public. Tickets may be easily obtained by the trade but these will not be transferable to others not in the trade. The committee in charge of the show is headed by Sam Miles, N. A. C. C., a veteran in handling big shows; M. L. Heminway, general manager of the M. A. M. A., and S. D. Black, S. E. A.

Invitations to exhibit have been sent to service equipment manufacturers. An

The meetings committee consisting of Frank A. Bonham, N. A. C. C.; C. A. Vane, N. A. D. A., and C. F. Clarkson, S. A. E., have arranged an excellent list of subjects from which to select the program for each session. Speakers of authority and prominence will be selected and the subjects illustrated by moving pictures and slides. Among the subjects listed are: "What the Public is Entitled to Receive from Service Men," "Selecting and Training Personnel is Important," "Selling Service," "How to Properly Fit Pistons and Bearings," "Adjusting Brakes," "How the Service

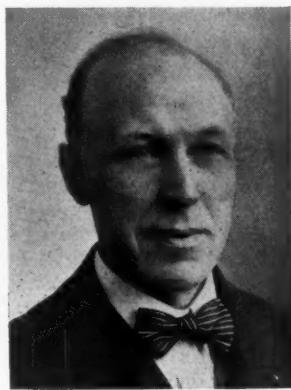
Man Can Co-Operate with the Engineer," "Methods of Repairing Alloy Steel Parts," "Lubrication," "Shop Layouts and Selection of Proper Tools," "Simple Accounting Systems," "Electrical Systems Explained."

A local committee headed by B. G. Koether, will attend to hotel reservations for the visitors. Owing to the fact that another convention will be held in Detroit at the same time it is advisable to make early reservations. Mr. Koether can be reached at the General Motors Corp.

Several of the factory service heads will arrange for meetings of their field and

service men during the convention and this plan will, it is believed, be adopted by a number of the factories.

At the time this article was written there is every indication that the space at the show would be oversubscribed. The service committee of the N. A. C. C. is preparing plans to make known the features of the events throughout the country so that it promises to be the largest automotive meeting in service yet held. The service committee's secretary, H. R. Cobleigh, will supply stickers on the meeting and show for mailing. Apply N. A. C. C., 166 Madison Ave., New York.



S. A. Miles



H. L. Heminway



S. D. Black

The Rubber City Turns to the Motor Bus

Increased Trolley Fare and an Expiring Franchise Causes Akron, Ohio, to Look to the Motor Truck Industry for a Solution of Its Difficulties

AKRON, one of the first cities in the United States to adopt a system of electric railway transportation, today depends absolutely upon the motor bus for its means of transportation.

Bus service has entirely replaced street cars in this city. The cars were withdrawn from service by the Northern Ohio Traction & Light Co., after their efforts to secure a seven-cent fare failed. It was the old story. Their franchise was expiring and it was then that they asked for an increased fare.

Through all this the city council backed up Mayor Daniel C. Rybolt in his promise that the traction company could either operate at a five cent fare, as they had been doing under their franchise which expired at midnight on Jan. 31, or else tear up their tracks and get out of the city. A city ordinance was passed to this effect and when several conferences failed all city line street cars were withdrawn from service early on the morning of February 1st.

Then began one of the most momentous periods in all Akron's history. Akron has a population of 200,000. The traction

company had been carrying approximately 125,000 passengers daily, with a peak load of 8000 an hour. Akron's main industrial plants—the rubber factories—are widely scattered throughout the city. It was absolutely essential that a system of transportation could be provided which would care for all these thousands of employes, as well as the regular traffic.

Mayor Rybolt and his councilmen immediately began to secure busses to replace the street cars. Busses were soon rolling in from all sections of the country, and they are still coming.

It was entirely impossible that a new system of transportation could be placed into effect, replacing a well organized traction service, and obtain satisfactory results within a few hours.

A Gigantic Task

Devoting practically every minute of their time to transportation, Mayor Rybolt and his co-workers soon began to achieve results. One of their greatest helps was the fleet of more than 200 Fords cars which were shipped into Akron from Cleveland, Columbus and Detroit. In the

absence of a sufficient number of busses, these jitneys were pressed into service.

The problems facing city officials were mountainous. Licenses had to be procured, provisions of the local bus ordinances enforced and hundreds of minor questions answered and carried out. None of these same city officials had ever had the least experience as bus experts.

To aid in helping Akron, other cities offered aid. Detroit sent F. W. Savage and W. F. Evans, both men connected as officers with the Detroit Motor Bus Co. W. H. Moore, head of the Cleveland-Akron Bus Co., not only gave his aid in person, but furnished a number of large busses to help during the emergency.

Since those first few days there has been a very noticeable change. Offers have been received from various large bus companies throughout the eastern part of the country to operate their busses here under the city's watchful eye. A number of these offers have been accepted and already a number of busses from New York city are in operation here. Other states have sent numerous cars, principally New Jersey, a number of these com-

ing from Newark, where busses were in operation for 90 days during the street car strike. Ohio has furnished the great majority of those in operation at present, but New York City will undoubtedly lead when the system is finally completed.

At present busses have been operating at a five-cent rate of fare with no transfers. Under plans of council this will be changed within the next week, as new contracts which have been approved call for a five-cent fare with one-cent transfers. The transfer problem has been the one great drawback to date. But under the system now being worked out, the respective companies contracting with the city will honor each other's transfers, temporarily at least.

An Uphill Fight

In his fight to motorize Akron, Mayor Rybolt has not had things all his own way. He has been steadfastly opposed by a minority group in council and they were responsible for the defeat of a proposed franchise which would have been given to a company organized as the "Akron Transportation Company." When the franchise plan failed, council then took up individual contracts with the various companies and finally passed a number of these.

These contracts govern the routes to be covered by the respective companies to whom they are issued. They also set the rate of fare and call for transfers at one cent each. A $2\frac{1}{2}$ minute headway between busses is planned by these companies at present. Street cars had a three minute headway.

Although demanding a seven cent fare at first, the traction company agreed to

accept a six-cent fare with free transfers. This the city had repeatedly refused to accept. Recently the traction interests made a last minute compromise offer which included a five-cent fare with one-cent transfers. Everything seemed set for a settlement of the transportation situation when an unexpected break occurred when the city demanded that the company operate under the proposed rate until November 1924, when the people could vote on the proposition at the general election. This the company refused, expressing their willingness to operate for 60 days but no longer. They declared they would be operating at a loss during this period, but said they were willing to do so for 60 days, meanwhile the city to conduct an audit of their books and if the results showed that the company was entitled to an increase, this to go into effect at the expiration of the 60 day period.

The city administration remained firm in their demands, however, and all possibilities of an agreement ended then.

From that time the city has been even more active in its plans for a complete motorization of the city. These plans are going ahead rapidly and within a few weeks at the most, this city should be completely and adequately served by motor busses.

The Jitney Ordinance

A number of touring cars and busses were in operation in Akron before the withdrawal of street cars. These were operated under provisions of the city jitney ordinance which provided that the operator of the car must have been a resi-

dent of the city for six months before he could secure a permit to operate in the city.

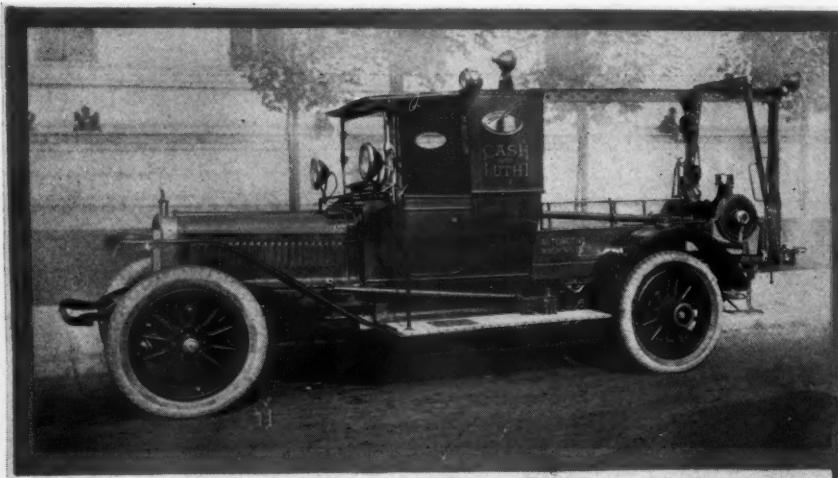
When the cars were withdrawn and motor busses secured to take their place, this question proved rather embarrassing to the city, inasmuch as the majority of busses in operation now are from other cities and states. Permits were given out of town drivers, however, and shortly after a temporary injunction was secured in common pleas court there, restraining the city from issuing permits to these operators. This injunction was secured by some of those who had been operating jitneys or busses previous to the dispute.

Trolleys Still Operate

The traction company still operates cars through the city from both suburban and interurban points. They operate an interurban line to Cleveland and Canton and also serve suburban districts. The city attempted to prevent this outside service by blockading street car tracks at the city limits, but the traction company secured an injunction restraining the city from interfering with interurban or suburban operations. This is still in court, no effort having been made to fight it.

Motor bus experts say that Akron can be served with 225 busses and at a five-cent fare with one cent transfers. This the opposition forces declare is impossible, asserting that at least 350 busses will be needed and that they cannot operate for less than seven cents. At present the city has about 150 busses in operation, with about 70 more enroute from eastern points.

BURNETT K. MAXWELL



Wrecking Car Built by Two San Francisco Garagemen. The Car Carries a Total of Eight Electric Lights

Cash & Luthi, garagemen of San Francisco, have built a very novel wrecker car which is equipped with an overhead track which carries a Kimkin towing dolly. It is used in lifting cars clear of the road without the use of jacks. There is a $\frac{1}{2}$ -ton chain block which is on a traveling trolley running on the overhead track which extends two feet ten inches over the wrecked car, allowing the use of cables to lift the wrecked car into position. When used in lifting cars in this manner, two rods are extended from the rear of the car frame to the ground, taking the strain off the wrecker car. Ordinarily the Kimkin towing dolly is held in the subframe and supported from the chain block. On the rear of the overhead track there is a large searchlight for facilitating night work. The car also carries a Kimkin universal one man tow bar, which is used in towing disabled cars when all the wheels are in running condition. There is a capstan in the rear wheels for pulling wrecked automobiles out of inaccessible places. In addition to carrying a search light at the rear of the overhead track there is also a searchlight at the front of the overhead track, and one on each side of the cab. Two tail lights are carried, one at the top of the overhead track and one at the lower left-hand side. These combined with the two running lights on the front of the windshield makes a total of eight electric lights.



Never Allow More for a Truck Taken in Trade Than You Would PAY FOR IT IN CASH!

(PASTE THIS IN YOUR HAT)

THE above title will undoubtedly indicate to the reader that this article deals with one of the popular topics of the industry—the Trade-in. It does that and more. It's good, sound common sense advice. We believe that if all those dealers, who are losing money because they make excessive allowances on used trucks, would follow the advice given above—well there wouldn't be such a thing as a trade-in problem for them.

As a matter of fact there isn't any trade-in problem—insofar as the whole industry is concerned. It's a group problem. A small percentage of the industry is making all the racket and the rest are disturbed by the noise.

If you ask the dealer, distributor or manufacturer handling heavy capacity units what he thinks is the biggest problem before the industry he will answer non-hesitatingly—the trade-in. He's so used to the trade-in as his problem that he thinks it's a problem with every dealer in the country.

That individual forgets that last year's production exceeded 1922 production by 48 per cent and that most of the 380,000 trucks sold during 1923 were sold by dealers!

Certainly the trade-in is a problem, but not a general one. When the heavy-duty truck dealer thinks of the trade-in problem he believes it to be a national condition. He figures every dealer in the business has the trade-in bugaboo staring him in the face.

As a matter of fact the trade-in is a problem with only a small portion of the industry! It's confined to a certain class of vehicles. Those few manufacturers who are known to do all this wild trading seem to be having a lot of fun out of it at the expense of the rest of the crowd.

Analyzing truck production figures of 1923, will show that the actual amount of wild trading done was very small in comparison to the total sales. This may seem astounding to some but here's how it figures out.

First of all, we must concede

the fact that the trade-in is not a problem in the light capacity truck field. Of course dealers in the light commercial car field take trucks in trade, mostly their own makes, but the retail price of those trucks is too low to permit of long discounts or big allowances. By light capacity trucks, we mean trucks of $1\frac{1}{2}$ ton and under. The accompanying production chart shows that 92 per cent of the total production was in this light capacity class, whereas the production of medium and heavy capacity units was only 8 per cent.

Now every dealer knows that most of the fleet owner business is done either direct or through branches. In fact, the dealer knows the fleet owner business doesn't bring him much profit, because as soon as he interests a large firm in a few trucks, said firm places a "national business" order and the dealer is let down

from normal profit to about 5 per cent. If we eliminate the fleet owner business, which is mostly in heavy capacities, and usually done in the large centers, we find that the passenger car and truck dealers in the small communities have sold approximately 90 per cent of the trucks in this country.

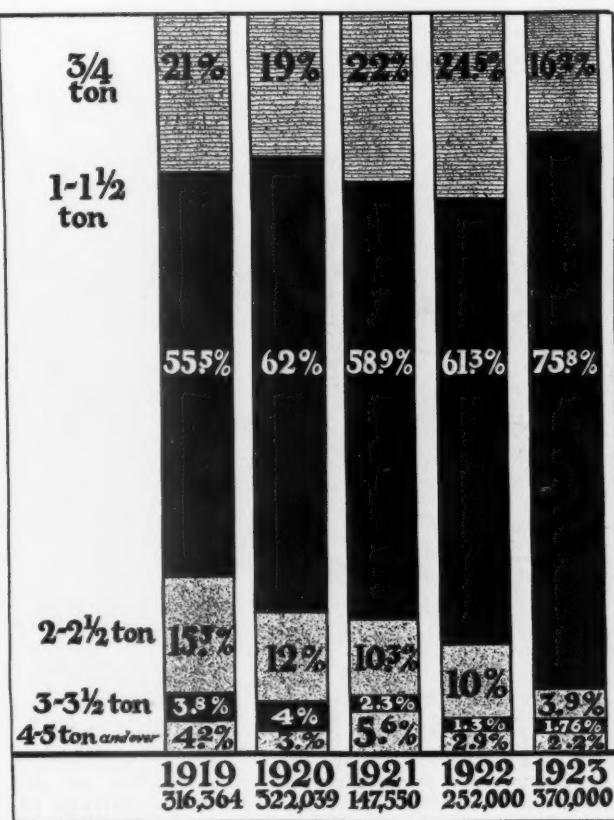
Get that—the combination passenger car and truck dealers in the small communities have sold the biggest part of last year's production.

Therefore the trade-in evil is not a general problem but a sectional problem. It's a big city problem, where most of the branches are located. It's a fight among branches who usually handle about the same capacity vehicles. The big city is the hotbed of the trade-in.

Ninety-two per cent of the trucks produced last year were small trucks. They were bought by the farmer and the retail merchant in the smaller communities. The small town dealer sold most of those trucks! It is for that reason that this publication is continually advising motor truck manufacturers to cultivate the smaller communities. A few dealers in small centers will total more sales in a year than one branch in a large city, for the reason that the branch will have to compete with all the other branches in the same place mostly on deals in which the trade-in figures prominently.

How many branches are making a profit in proportion to the capital invested? Very few. In fact some of the big manufacturers admit that where one branch is making a profit another is losing heavily. Therefore, the dealer who is trying to compete with the branch will eventually lose out, because the branch can usually go him one better on price allowances. If the truck dealer would lay off such deals and concentrate his efforts on prospects who are not as yet using motor transportation, he would get away from the price haggling deal.

When a dealer sells on a price basis—he can't possibly sell transportation—he's simply selling



Truck Production by Size, 1919 to 1923, Inclusive

so much steel, iron and rubber at a price. If the dealer hasn't any better sales story than a reiteration of specifications and price allowances, it is self-evident that the purchaser will not buy a truck simply to replace his present equipment on the basis that it is losing money for him, or that it is antiquated looking or pretty well shot to pieces. That isn't a basis on which to sell him a new truck, because in most cases the owner will come right back with the statement that if he can buy the new one without losing much on the deal he will buy. That immediately leads into a price dickering deal. The owner has not been impressed with the fact that the new truck will save him money even if he only got junk prices for the old one.

With proper salesmanship the dealer would switch that owner's mind from the trade-in angle immediately. He would so depreciate the old truck in the eyes of the owner, in a diplomatic salesmanship fashion, so that the owner would unsell himself on the old truck. Strange as it may seem, there are lots of dealers who think the average owner really believes that the old truck is worth the money he asks for it.

Why shouldn't the owner get the top price for the old vehicle, especially if the dealer falls for the trade-in stuff.

If he were selling transportation he would politely tell the customer that he is selling a product which has no fictitious value attached to it and that if he attempted to meet the prices of his competitors he would not be able to give the customer the service he expects eventually at reasonable prices.

When a dealer cannot make a legitimate profit on a truck he had better not sell it. No manufacturer can exist under present day competition unless he can make a profit, and if the dealer can't make a profit then the manufacturer will not either.

If dealers would spend more time studying the customer's delivery department or his shipping room methods, he would have more arguments to advance in favor of this truck. He would be able to make suggestions to which any merchant or manufacturer would listen.

When the truck salesman has no idea of the manufacturer's hauling problems, how can he expect to sell such a customer, especially if the customer has been using trucks for sometime and knows perhaps more about the truck business than the salesman? It is no longer a question of selling the truck customer a vehicle but to so fit that vehicle to his business that it will not only reduce his delivery expenses, but make that customer a booster for the dealer.

But selling transportation cannot be done if the dealer or his salesmen consider the truck simply a unit which they have got to sell whether they want to or not.

There are plenty of dealers today that are selling transportation. They are ready to sell the customer a truck, a tractor, a trailer, the proper type of body, hoists, loading apparatus, etc. Some dealers will object to this on the grounds that they haven't the capital to invest in all these products. Neither have some of the dealers we refer to. But those dealers know all about those products. The dealer who sells transportation studies the customer's business, by looking beyond the immediate sale of a vehicle.

Many truck installations are uneconomical, not because the vehicle itself is not performing properly but because auxiliary apparatus is not being employed to get the most out of the truck. When the dealer sells the truck in conjunction with other apparatus as a means of reducing delivery expenses for his customer—then he is selling transportation. With enthusiasm for the truck business he will not view it as a vehicle peddling proposition but a high grade, interesting merchandising proposition—that calls for constant study and high class business ethics.

A. G. M.



Enthusiasm Wrongly Applied!

If some of this energy were expended by salesmen and dealers in studying transportation, some cash registers would jingle more merrily. If some salesmen would spend their spare time reading and studying their trade journals, they would undoubtedly increase their income and they would have no apologies to make to the boss.

Motor Truck Club the Watch-Dog for Truck Owners in Ohio

This Newly Formed Club is Perfecting a Permanent Organization and is Planning a Number of Real Services for Its Members

By T. F. CULLEN

AUTOMOBILE clubs have been familiar institutions for many years, and have performed valuable services. Motor truck clubs, organized along similar lines, are not so common, however, so the new organization known as the Ohio Motor Club Co. is worthy of more than passing mention. This club was organized last December, under the leadership of George K. Wadsworth, who for the past nine years has been the Cleveland representative of the General Motors Truck Co., first as a distributor and later as branch manager.

It sometimes happens that the efforts of automobile clubs and similar organizations to obtain favorable consideration for passenger cars result in discrimination against motor trucks. Legislators, the general public, newspapers and even many passenger car owners do not always realize the close community of interest that exists between the various forms of automotive transportation. That was the situation in Ohio which prompted the formation of the Motor Truck Club.

For the past five years, and up to the end of 1923, motor trucks were taxed by the state of Ohio at the following rates: up to 25 hp., (N. A. C. C. rating) a flat tax of \$8 plus 20 cents per hundred pounds on the weight of the truck and rated capacity load; trucks rated between 25 and 35 hp. paid a flat tax of \$12 plus 20 cents per hundred pounds; and trucks rated at more than 35 hp. paid \$20 plus 20 cents per hundred pounds. Passenger cars paid the same flat rates as trucks, but no additional weight tax.

This method of taxation was considered equitable. Half of the proceeds were turned into the state highway maintenance fund, and the remainder paid over to the county from which the car or truck was registered. Receipts for the past few years had so far exceeded expenditures that a surplus of some \$2,056,315 had accumulated in the state fund up to last June, over and above all appropriations authorized.

Indications were that this surplus would be still further increased this year, even under the old registration scheme, as the appropriations authorized amounted to less than the probable receipts for this year. Nevertheless a new law was passed last year, providing for increased regis-

tration fees on motor trucks particularly. This law passed with no publicity, and the first intimation that any of the motor truck owners had of it was just before the 1924 license applications were due.

Under the new law, trucks rated at less than 25 hp. would pay the same fee as before, a flat tax of \$8 plus 20 cents per hundred pounds; trucks rated between 25 and 30 hp. would pay \$12 plus 30 cents per hundred pounds; while trucks rated at more than 30 hp. would be charged \$20 plus 80 cents per hundred pounds.

Of all the larger sized trucks in use and being built today, every make but three was severely penalized by the new law. For instance, one well-known 5 ton truck with a cylinder bore of 4½ in. would have to pay a total tax of \$72, while another equally well known truck of the same capacity and weight, the same tire size, but with a cylinder bore of 4½ in. would have to pay a total tax of \$208. And all because one truck happened to be rated at 28.9 hp., or just under the dividing line, and the other at 32.4 hp., or just over the line.

When this situation came to the attention of the truck owners of the state a big outcry resulted, but it seemed as though it was too late to do anything about it until 1925, when the state legislature meets again. However, a group of motor truck dealers and fleet owners in Cleveland got together on December 23d, raised a fund on the basis of \$10 per truck owned by each, and hired a lawyer. It was decided to attack the new law on two grounds—first, that it was discriminatory, as outlined above, and second, because it would result in a considerable and unnecessary increase in the surplus in the state's highway maintenance fund, over and above all appropriations authorized by the legislature.

On January 7 a temporary restraining order was issued by Judge Kinkead of the Common Pleas Court in Franklin County, in which Columbus is situated. The suit was filed in the name of Fisher Brothers Company, a large chain store grocery enterprise which operates 205 retail stores in and near Cleveland.

As matters stand at the time this is written, the larger trucks which are effected by the new law are being allowed to continue in operation under the 1923



GEORGE K. WADSWORTH

licenses, pending decision on an appeal which has been carried to a higher court.

Regardless of the outcome of this effort for equitable taxation, the Ohio Motor Truck Club, under Mr. Wadsworth's management, is perfecting a permanent organization and planning a number of real services for its members, along the lines of the services rendered by automobile clubs to passenger car owners. Bulletins are being sent out to all members regarding changes in weight and speed restrictions, temporary or seasonal restrictions, and similar factors which affect truck operating schedules.

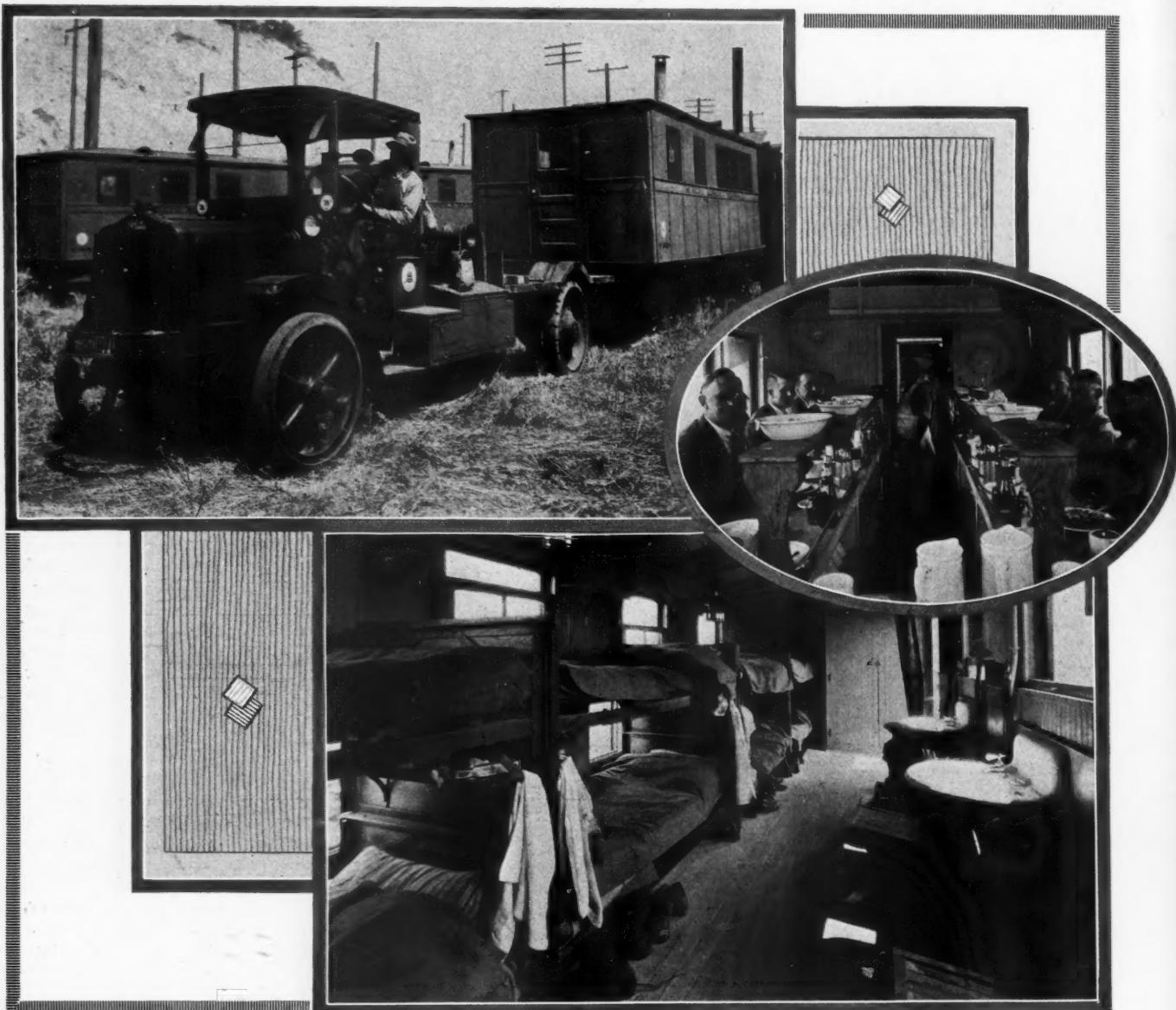
The club is working with the object of building up the roads to carry modern traffic, instead of restricting traffic and loads to suit the present inadequate roads.

No local clubs are being formed or under contemplation, the plan being to build up one strong state-wide organization with headquarters in Cleveland. Membership is open to all motor truck owners on the basis of \$10 per year, regardless of the number of trucks operated. There is also an associate membership, at \$1 per year, open to all employees of active or sustaining members. It is realized that in order to accomplish the desired results the club must have a large membership volume, and a strong drive is now under way towards this end.

Officers of the Ohio Motor Truck Club are as follows: President, John H. Price, of Price, Shepherd & Graves, attorneys; first vice-president, Henry G. Schaefer, president of the Gustav Schaefer Wagon Co.; 2d vice-president, Manning F. Fisher, president of the Fisher Bros. Co., grocers; treasurer, A. F. Amor, president of A. F. Amor Motor Trucking Co.; recording secretary, Warren C. Wheelock, president of the Liberty Cartage Co.; secretary-manager, George K. Wadsworth, 609 Hanna Bldg., Cleveland.

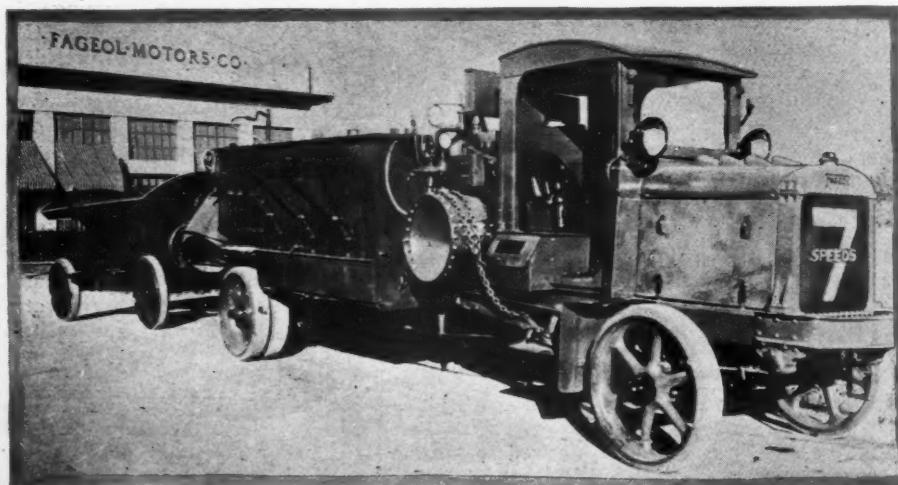
The injunction and the subsequent efforts of the Ohio Motor Truck Club on taxation matters have no effect upon the Ohio Public Utilities Law, which places certain classes of motor trucks operated for hire under the control of the State Public Utilities Commission. The restraining order issued January 7th affects only trucks rated at more than 25 hp., as the smaller trucks are taxed on the same basis under the new law as under the old one in force for the past five years.

The Motor Truck Playing Its Part in Industrial Progress



Almost a Traveling Village

Motor trucks are bringing a complete change for the better into the lives of telephone toll-line construction men on jobs away from the centers of population on the Pacific coast. They also are increasing the efficiency of these construction gangs from 50 to 100 per cent. The Pacific Telephone and Telegraph Co. has designed a construction camp train, consisting of cook-car, dining car and bunk car, all drawn by a White truck which carries a gang of 20 to 25 men, feeds and sleeps them alongside the job. The dining and cook cars and the sleepers are mounted on trailers, and two of these trains have been in successful operation for eighteen months in the State of Washington. A third has just been added. In the past the men had to ride from five to twenty miles from their jobs to the camps where they ate and slept; now these motorized camps follow the job, carrying the men with them and feeding them as well as furnishing them with sleeping quarters wherever they stop. The labor turnover has been reduced nearly one-half by the new arrangement.



Maintenance Equipment Operated by a Southern Electric Railway

The accompanying photo shows a novel truck operated by the San Diego Electric Railway Company. Just back of the cab is an air compressor and air tank, which supplies compressed air for cutting asphalt with pneumatic chisels or jack hammer and for chipping out cracks on concrete streets with chipping gun and for operating tamping tools, and other uses. In the center of the truck there are combination material bins, with capacities of 1000 lb. of cement, one cubic yard sand and two cubic yards of gravel or rock. Gravity feed from all the bins is controlled by hand-operated gates to the mixing apron. Immediately back of the material bins is a rotary concrete mixer, driven by an auxiliary shaft from the transmission, and a 150 gallon steel water tank. On the rear is a tar or road oil-heating tank with a capacity of 50 gallons and heated by a gasoline burner arranged under the tank. The water tank can be filled by means of a centrifugal pump provided with a self-priming device and a suction hose. It is also equipped with a drawbar attachment to haul materials on trailers, the trailer used being of special design side dump, manufactured by the Reliance Trailer and Truck Co., of San Francisco. The truck was manufactured by the Fageol Motors Co., of Oakland.

Carrying the Message of Service to the Small Community

A. E. S. A. Plans Intensive Campaign to Aid Both the Dealer and Manufacturer in Bettering the Automotive Electrical Service in Towns and Villages

By C. S. PERRIE

AT the conclusion of the annual meeting of the Automotive Electric Service Association (the authorized service stations), held during the Chicago Show, it was quite evident that although considerable progress had been made during 1923 in providing the owner, dealer and manufacturer with better electrical service, still greater effort must be made if the authorized station and the A. E. S. A. are to be accepted as the final solution of the electrical service problem in the automotive industry.

There is no denying the fact that electrical service is still spotty; that is to say, there is still a marked contrast between the service received by the owner in the large places and those in the small centers. While it is true that this condition exists with reference to mechanical service in the final analysis, we must consider that there is much difference between the two, particularly when a major electrical repair is involved.

The equipment manufacturer has spent large sums in the extension of electrical service and generally speaking he is pretty well represented throughout the country. The distribution of genuine replacement parts is such that they can be easily obtained. But the installation and proper relation of the components, testing, etc., requiring trained electrical mechanics, is still a problem in the smaller places.

That this branch of the service is not entirely satisfactory is reflected in the views of the truck manufacturer and dealer, also the owner.

The task of building up service in the smaller communities has been practically accepted by the A. E. S. A. which at the meeting endorsed the sectional plan for the extension of service. As has been previously pointed out in these columns the country will be divided into sections. Two sections have already been organized—the New York and the Northwestern. The nucleus of each section will be A. E. S. A. members and it is up to each section and member thereof to carry on the work of extending service to the small places, and a service in keeping with the policies of the organization and those of the equipment manufacturer. The plan should have the advantage of increasing the membership in the A. E. S. A. as well as extending service for the manufacturer. The acceptance of the section plan was one of the high spots of the meeting.

That electrical service insofar as commercial cars is concerned must be im-

proved if the truck manufacturer, dealer and owner are to be satisfied was brought out in an address on "Electrical Service in the Commercial Car Field," by C. P. Shattuck, field editor, The Commercial Car Journal. After quoting production and registration statistics, generally and specifically, he said: "The increase in truck production last year was 48 per cent, two per cent less than that of passenger cars. Too little attention is given the truck industry by the statistician. Too many have acquired the habit of thinking in terms of JUST TRUCKS when it comes to analyzing the possibilities the commercial car affords those engaged in service in its various ramifications.

"On Dec. 31, 1923, there were 1,796,356 trucks registered, an increase of nearly 28 per cent over the preceding year. The location by states is pertinent to a service analysis. New York leads 247,974. Pennsylvania is second with 164,920 and Ohio third with 147,918. Illinois has 122,007. New Jersey, Massachusetts, Michigan, Indiana and Texas have over 50,000. The greatest increase has been in the smallest state, Rhode Island, which gained 81 per cent. The increase in registrations is quite noticeable in the Southern states. The retail value of trucks sold last year was \$381,000,000.

"Production since 1919 has shown an increasing tendency towards the light truck, that from three-quarters to 1½ tons. Of the 1923 production about 90 per cent was in these capacities. The 1-ton size represents about 50 per cent."

The trend in electrical equipment was discussed and shown by charts, the figures of which are shown herewith in tabular form:

Year	Percentage by Years	Number of Models	Per Cent Magneto	Per Cent Battery	Per Cent Starters
1916		593	96.5	3.5	11.3
1917		535	97.2	2.8	11.9
1918		312	89.7	10.3	22.6
1919		553	90.8	9.2	22.7
1920		568	90.5	9.5	25.3
1921		629	92.2	8.8	29.8
1922		669	89.6	10.4	33.0
1923		609	84.4	15.6	43.3
Capacity	Productions by Capacities	Number of Models	Per Cent Magneto	Per Cent Battery	Per Cent Generators or Motors
1,000 lbs.		3	0	100	100
1,500 lbs.		13	31	69	77
1 ton		62	45	55	81
1½ ton		27	63	37	80
2 ton		82	84	16	48
2½ ton		90	86	14	43
3 ton		46	94	6	32
3½ ton		70	95	5	44
4 ton		26	99	1	33
5 ton plus		80	88	12	25
Tractor types		20	85	15	50
Totals		609	84.4	15.6	43.3

as bad as it is thought to be. Education of the dealer and owner is accomplishing results. More will have to be done, however. Unless the shops using substitute parts are sold on the ultimate profit of using genuine parts and doing the job right, they will continue to deflect business from the authorized station. There is a task for both the A. E. A. and A. E. S. A. to educate and sell these shops, and the owner as well. The owner is interested only in two things: Keeping the truck idle as little as possible and maintenance costs as low as possible.

"The A. E. A. and A. E. S. A. will make greater progress towards better service when the truck factory, its service head, the dealer and his service manager are really sold on the idea of the authorized station with genuine parts and real service."

Need for Real Electrical Mechanics

"There is a pressing demand for real electrical mechanics and an even greater need for that type who takes a pride in his craftsmanship and is not so much influenced by the pay envelope. The influence of the latter cannot be underestimated but just as long as the mechanic sees only the money, just so long will the day of ideal service be postponed.

"The back alley shop appears to be a problem in electrical service. It can be eliminated by providing a better and cheaper service. The troublesome shop will be eliminated when the service station sells the truck dealer and owner what real service is.

"Your association can aid in bringing about better service by the large authorized station extending the scope of its activities by supervising the establishment of service where it is sorely needed. These stations, however, must be given a sufficient number of accounts so that they can make some money. If the large service stations work out some plan to enlarge service the back alley shop will not be a factor.

Service Must be Speedy

"There is great need in the smaller communities of what may be termed first aid service, a service which will enable the owner of a truck to resume his trip with a minimum of delay. Most electrical troubles are of a nature that can be remedied to that extent that the truck can be sent on its way. Service facilities

could be enlarged by some plan whereby the truck owner in trouble could find on every highway and byway service of this kind and be assured that when he called upon these service shops that he would receive a square deal and that the broken part is replaced by one of the same type and make as came with the original equipment, not a substitute. Furthermore these small service shops should be the contact between the truck owner and the large or authorized service station so that in the event the service required the right equipment and trained men the truck would reach the station and not the back alley shop.

"These small shops could be educated and trained to do the first aid work right, charge right and furthermore some plan should be worked out whereby a reasonable stock of genuine replacement parts for first aid service could be stocked without involving too great an investment on the part of these shops. The advantage of such a plan would be to plant the seed of good service and from it would grow bigger and better service. The new little shop must be started right and guided right until it is able to stand on its own

Each station would have to care for 17,306. In the case of New York we can assume that the truck owner has greater opportunities for real service than the owner in the state just referred to.

"Taking 16 states through the centre of this country and from Canada to our southern boundary it will be found that there are 612 authorized service stations to care for 3,135,214 cars and trucks or an average of 4955 each. I am well aware of the factors, conditions, etc., which might explain these conditions but I ask should a truck or car owner be penalized in service because he does not live in New York?

"While I appreciate the many handicaps of a unit replacement service plan it would surely eliminate the back alley shop, for it could not afford to stock the parts or sell service as cheaply. But owing to the multitude of designs, variation in installation and other factors, the unit service replacement does not appear feasible at the present time. One of the advantages of the plan, however, would be that the truck dealer or owner would favor the station reducing idle time and costs in service."

F. A. Oberhue, United Motors Service, held that the authorized service station would impress the car dealers if the electrical men were more neat in their appearance and the shops as clean and as attractive as the car dealers. This brought out the point that some of the members supplied uniforms and kept them washed. The suggestion was made that some type of uniform be worn with an insignia to distinguish between just repairs and the electrician. It was also advocated that electrical service be merchandised as technical service, not repairs and parts.

Vernon W. Collamore, Atwater Kent Mfg. Co., read a paper on radio which showed that the electric service station was the proper channel for distribution because it had trained electrical men who could render real radio service. It developed in the discussions that followed that many of the members had made real money in the winter selling and servicing radio. The general sales manager of the American Flatlite Co. explained how headlight adjustment enabled the service station to make profits and build customer contact.

Four new governors were elected to replace that number retiring. Those

(Continued on page 25)



P. J. Durham

feet. But there should be a sharp line drawn as to the extent of the service these small places should render. They should not be allowed to extend their service without experience, equipment, capital and without a knowledge of the service policies of the equipment maker.

"There are too few authorized service stations and too few places where real electrical service can be obtained. Giving a garage or a repair shop permission to hang out a sign doesn't make it a real service place. Too many shops attempt work the results of which are costly to the owner and to the equipment manufacturer. To bring out more clearly the need for more good service stations, authorized and first aid, let us analyze conditions.

"At the time the data was compiled there were nearly 2400 authorized electrical service stations in this country. If these had the 15,281,295 cars and trucks evenly divided each station would be called upon to service 6367. But such is not the case. There is a big discrepancy. For example: New York with 1,214,090 cars and trucks has enough service stations to care for exactly 2897. An extreme case is a State with an area of 46,000 sq. miles, 103,050 cars and trucks.



F. W. Duffeck



E. S. Cowie



Our COMMERCIAL CAR JOURNALISTS

Selling Motor Trucks in 1924

By WALTER R. HOWELL, Advertising Manager Standard Motor Truck Company, Detroit

EVERY motor truck manufacturer will from now on be put to the test of securing sales in the face of the keenest and fiercest price and effort competition in the history of the motor truck industry.

The motor truck industry has passed through the period of experimentation and the period of supplying the spontaneous demand for its product and is now entering the period of actually selling its product. This third period in any industry is one of intensive and vigilant commercial contest.

The price and effort competition, into which the motor truck industry is headed, will test the mettle of every truck manufacturer, consequently the far-seeing manufacturer will put into use every factor that can be developed and applied to produce sales.

It is essential of course that the motor truck manufacturer's product be as excellent from every standpoint and as low in price as his resources, experience, facilities and organization can produce it.

But—even the best product in the world has to be sold!

Therefore, the motor truck manufacturer who has the most efficient sales organization—whose men (District Sales Managers, Distributors and Dealers) are trained to sell motor trucks, to comb territories and to see and grasp sales opportunities that competitors do not recognize—will be the one who will get more than his share of the business in the future.

The motor truck manufacturer's dealer organization is the very life blood of his business.

A "good" motor truck dealer can sell a poor product just as successfully as a "poor" motor truck dealer can sell a good product.

But, with two lines of trucks of equal value, the good dealer merchandiser will quickly out-distance his competitor. He will make good showing even with a second-rate truck.

Thus, the motor truck manufacturer with a good product should concentrate his greatest efforts on developing his dealer organization—to improve the sales efficiency of all his dealers and to help them all to make money with his line.

Yes! But what is the best way to do it?

In order to increase materially the sale of his product it will be necessary for the motor truck manufacturer:

1. To increase the dealer representation of his line of motor trucks throughout the country.
2. To improve the sales-ability of every individual who sells his truck—new dealers, old dealers, their salesmen, and his factory representatives.

Here's how these things can be accomplished.

Increasing Dealer Representation

There are four major factors to consider in planning to increase the number of dealers who handle a motor truck manufacturer's line. They are:

- A. Sales Possibilities—the present and

the potential markets for his line of motor trucks.

- B. The Prospective Dealers—the classes of business men who would make dealers for his line and where to find them.
- C. The Manufacturer's Franchise—as a good, profitable business opportunity for aggressive merchandisers.
- D. Convincing Prospective Dealers—that they can make money in the truck business by applying some real, common-sense methods to their work.

A detailed analysis of these factors will reveal their effect on the subject in mind. This analysis follows:

Truck Sales Possibilities

Where are motor truck manufacturers going to sell their future output of motor trucks?

The answer to this question is in the country that comes under the following two classifications:

1. More intensive sales cultivation of the territories in which their lines are now established—and by
2. Developing new sales territories through the appointment of new dealers for their trucks.

So far, the greatest sale of motor trucks has been in the urban territories. There you will find the largest number of successful dealers with a market already well established, and yet possessing unlimited sales possibilities.

THIS department is open to everyone for discussion on subjects relating to sales and service, or problems affecting the manufacturer, dealer, salesman or serviceman in the motor truck industry. Frank discussion and constructive criticism is encouraged. Suggestions for the improvement of conditions in the industry and ideas that will be of most benefit to all concerned are especially welcomed in this department.

What's on Your Mind? Tell Us About It!

The rural sections of the country also possess great potentialities for motor truck sales. While the individual rural dealer may average only a few trucks a year—the number of potential rural dealers is great enough to produce a large volume of good business even from such small dealer contracts.

Prospective Truck Dealers

The motor car and the motor truck dealers and garage owners are, of course, the logical prospects to go after in extending a motor truck manufacturer's dealer organization.

But, no opportunity should be lost to interest business men who have been successful in merchandising in other lines of business.

Such men know the fundamental principles of good merchandising and just what constitute good business methods. They can be instructed quickly in the methods of the motor truck manufacturer. And those men who are really adaptable will be more likely to give the motor truck manufacturer's line proper representation than the weak-kneed type of dealer who is always changing from one line of motor trucks to another.

The Manufacturer's Franchise

To make any motor truck manufacturer's franchise just as attractive as it can possibly be made to the prospective dealer, this franchise should be very comprehensive in plan and definite in form.

When the truck of any good manufacturer is sold, the buyer knows that he has a good truck; how it operates; where he can get service and advice, etc. In other words, he is equipped with everything that is needed to secure the results that he expects from the truck.

Now, when the District Sales Manager of a motor truck manufacturer calls to interest a prospective dealer in his franchise, just what has he to offer to that dealer?

A good line of trucks at an honest price—yes! Trade and newspaper advertising—yes! Advertising literature—yes! Advice and technical assistance from the factory—yes!

But, he cannot say to that dealer: "Here is the Blank's Truck Dealer Plan. It covers every detail of selling, financing and servicing Blank trucks. If you will really work and follow out this Blank plan, you'll sell trucks and make money and build a reputation for yourself in this community."

Naturally, it is impossible to make a man successful. It is only possible to show him just how to proceed. Then it is up to him to see that his initiative and efforts are applied so that they will carry him along.

Definite Dealer Sales Plan

This definite dealer sales plan should be developed in detail and put into convenient form so that the district sales managers of the motor truck manufacturer could carry it right along with them—lay it down in front of a prospective truck dealer and show him just what the company they represent has to offer.

Then when the prospective dealer signed

up to handle the line of motor trucks built by the company that the district sales managers represent, he should have a copy of the definite dealer plan for his own use and guidance.

To be most effective the definite dealer plan of any motor truck manufacturer should cover the following subjects:

1. PRODUCT

Proper information about every detail and feature of the line.

2. MARKET

Methods and forms that would enable the dealer to analyze properly the sales possibilities of his territory.

3. SALES POLICY

Plan for dealer to follow in handling sales. Sales arguments in concise form. Outline of financing plan and its advantages. Review of company's sales policy as it applies to the dealer.

4. DEALER CO-OPERATION

Outline of co-operation extended to dealer—such as:

Bulletins on truck problems.
District Sales Manager's Aid.
Transportation Engineer's advice.
Statistical and Research Departments.
Help Loose Materials Division's Co-operation. Motor Bus Division's Research Reports.

5. ADVERTISING

Proofs of general publicity advertisements; samples of direct mail campaigns; proofs of newspaper advertisements; proofs of trade paper advertisements; samples of literature; copies of publicity stories.

6. SERVICE

Facilities of company for rendering service. Amount of parts carried in stock. Time it would take dealer to replenish his parts stock from branches or factory. Outline of company's service policy as it relates to the dealer.

How Are New Dealers Going to be Interested?

With all the truck manufacturers scrambling after dealers, offering various discounts and consignment propositions, making flattering promises of all sorts—and yet when these offers are simmered down to the dregs they are just about alike—how is any manufacturer going to interest new dealers or to put new life in those dealers he now has?

But, if the District Sales Manager of any motor truck company had a definite dealer plan to present that not only showed what the factory would do to co-operate with him, but also pointed out to the dealer just how he should operate his business and work his salesmen to guard against the common mistakes and how to use the improved methods, etc.—the prospective dealer could not help but feel that he had a definite, well-rounded-out business proposition that he could take hold of and handle successfully.

With a definite dealer plan the motor truck manufacturer would dominate his sales situation, would exercise greater control over the activities of his dealers, and would not be dependent upon the

natural ability of his dealers to secure the proper development of business for his truck in any dealer's territory.

This control would also enable the motor truck manufacturer to raise the weak dealer to a higher plane of sales efficiency and to guide the aggressive type of truck dealer to even greater sales success.

Convincing the Prospective Dealer

After all is said and done—the prospective dealer is interested in taking on a line of motor trucks for one reason only—and that is to make money.

Thus anything that the district sales managers can do to make the prospective dealers see that money can be made in the truck business if the dealer follows good business methods, will be mighty helpful to the whole motor truck industry.

The definite dealer plan would be useful in this work. It would enable the district sales managers to talk more from the standpoint of the dealer. It would show the dealer how he could help himself as well as take advantage of assistance that the manufacturer was willing to give him.

Improving Sales Efficiency of Dealers

Trucks must be sold. Dealers and salesmen must sell them. All things considered, the best trained dealers and salesmen will be the most likely to get the business.

The dealer should be encouraged to hold weekly meetings of his salesmen to make them more efficient and to check up on individual efforts of his men and to map out new, intensive sales plans for his territory.

The district sales managers of manufacturers who had a definite dealer sales plan could start this work when they sign up the prospective dealer—using the definite dealer plan as the basis for this instruction. Then, when they called on the dealer again it would be advantageous to have them check up the dealer on the study that he was making of the truck business in his territory and to give along selling lines any coaching that was necessary.

The definite dealer plan would also be useful for dealers who are at present selling the trucks of the manufacturer. Many things in the plan would be helpful to all of them, while the weaker dealers would find it particularly beneficial.

What do you think of the plan suggested by Mr. Howell? Do you think his plan will help sell the dealer? If you were approached by such a plan would you be sold on it? Let us have your comments—they will be helpful to everybody. The following subjects are suggested for discussion in our next issue:

Balloon tires—do you think they will become popular on the light trucks?

Are 4 wheel brakes an advantage on motor trucks?

Are truck salesmen underpaid?

Have you read the article on the Trade-in in this issue? Do you agree with us or don't you?

Which Are the Easier to Sell— Motor Trucks or Passenger Cars?

The Truck Dealer Will Say the Passenger Car, Just Because the Grass in the Other Field Looks Greener

In every walk of life, in every business there are plenty of individuals who are carrying on their work day after day, with a varying degree of success. Apparently they are satisfied, but down deep in their craniums they have a desire to do something different from what they are doing by daily occupation.

After interviewing many truck salesmen and dealers one finds the same condition existing among them as in every other profession or business. If we question some of these individuals closely we must conclude that they are simply laboring under an illusion—they just imagine the other fellow's business must be a better one than their own.

But that is a trait we find in most human beings. The white collared clerk in the front office, believes there is more opportunity for him in the shop. He thinks of the wages some of the mechanics are getting in comparison to his—he wishes he had taken up bricklaying or plastering. The mechanic thinks the office bunch has a cinch, a soft snap as it were, because they work over a desk-clean work, etc. The doctor wishes he had taken up law—at least he would have some time to call his own. So throughout the professions and trades we find many individuals who wish they were in some other business or profession—for the only reason that the grass in the other field looks greener.

When they get into the other field they'll find the color of the grass is just the same.

That's just what ails a lot of truck salesmen. They are gazing at the other field so much that they have let the weeds grow on their side. Which is just another way of saying that many truck salesmen are not studying their own proposition thoroughly enough otherwise they would see that they have the best prospects for a good future right on their side of the field.

The reason some truck salesmen wish they were selling passenger cars is simply because they think they are easier to sell, because there are more prospects and many more features which appeal to the eye, the comfort of the buyer, etc. He thinks of the many talking points the passenger car salesman can dig up in comparison to what a truck salesman can offer. He believes that if he had upholstery, beautiful finish, comfortable seats,

lots of equipment, front wheel brakes, balloon tires, etc., to warble about—why he could knock 'em dead. But, with a truck—now what is there to rave about on a truck. That's just about how some salesmen feel about truck selling.

It makes no difference what commodity a man sells, first of all he must have a thorough knowledge of his product. The more he knows about it, the easier he can sell it. He must know the functions of every part and how his product compares with competitive makes. From this the reader may surmise that we are advocating the type of salesman with the mechanical mind. Why shouldn't the truck salesman know the mechanical features of the truck he's selling? How can he talk intelligently to a prospect unless he

to adjust them and what the average interval is between relining jobs. The same thing would apply to clutch facings, valve grinding, carbon cleaning, connecting rod bearing adjustments, etc.

The truck salesman may not have beautiful upholstery to talk about, but he could dig up enough interesting "money saving facts" concerning his product that would not only sound refreshing to some truck owners, but would prove to the salesman that the more he actually knows about the truck he's selling the easier he will find it to make sales and the better the grass will look on his side of the field.

For after all the passenger car salesman has much more to contend with than the truck salesman. He must be a student of human nature, because he has more than one individual to sell, especially when selling to the family man. The speed of the car may suit father but not the son. Mother may like the sedan, but daughter likes the sport car better. The successful passenger car salesman knows how to handle such a situation. He must be diplomatic and resourceful, he must know all about the advantages of this and that type of body so as to sell all the members of a family on one model.

On the other hand the truck salesman has one selling weapon, which if used properly usually cuts down all sales resistance and brings the prospect to the dotted line.

That is the ultimate cost of operation and maintenance. The initial cost of a truck no longer determines its value to the owner. What it costs to maintain it is the most essential factor. This information, however, cannot be set down in book form. It's not ready made material. It can only be accumulated by the dealer and his salesmen by constant study and observation. It is the most profitable information the dealer can acquire. Much valuable sales ammunition can be gotten right from the dealer's own service department. It is the time element in service—the cost of keeping the truck on the road—that counts most with the transportation user of today. By closely studying this sort of information the salesman will find much to interest him in his business, that will help him make sales more readily and profitably—with the result that he will find the grass just as green on his side of the field. A. G. M.

THIS IS DEDICATED

To the motor truck salesman who thinks the life of a passenger car salesman is a "bed of roses." The purpose of the article is not to cast reflections on any other type of business but rather to show that a man's success or failure depends upon his own individual efforts. "The grass in the other field is never as green as it is painted."

has a thorough mechanical knowledge of his product? By that we don't mean that the truck salesman should have all the information on his finger tips as to the tensile strength of very piece of metal in that truck, or the dimensions of every bolt hole, but we do mean that he ought to know the construction of every unit in his truck—as it relates to service.

The day is here when the truck purchaser wants to know more about those parts which require frequent renewal or replacement. He knows for instance that brake linings must be renewed frequently depending on the service which the truck performs. The best truck lining made will wear out. The average truck buyer doesn't care a darn about the thickness of the brake drum—but he certainly is interested in knowing how much time it takes to reline the brakes—how much time it takes

Reo Announces New Twenty-one Passenger Bus

ASPECIALIZED body co-ordinated with a specialized chassis constitutes the new bus of the Reo Motor Car Co. of Lansing, Mich., an excellent example of modern development in that field. From the chassis angle, the standard Reo six cylinder engine, four-wheel brakes, compound rear springs and the combination of an unusually sturdy frame with a sub-frame structure for the engine and gear box are the outstanding features. The street car type of body announced at this time, seats 21 passengers in addition to the driver.

Of particular note is the arrangement of seats at the rear wheel houses. The fourth seat from the front on each side is reversed, so that the wheel house is entirely covered by this and the seat ahead. This eliminates the uncomfortableness and lack of leg room that is common at this point in many bus bodies. The seats are all standard and of the same size and height with the exception of the rear seat which extends across the full width of the body. As this type of body is intended for one man operation, entrance is made at a two-piece folding door at the right front. An auxiliary door for emergencies is placed at the middle of the rear wall of the body. The floor of the body is 25 $\frac{1}{4}$ in. above the ground line and the interior height at the aisle is 72 in. Two-piece windows of the Pullman car type are used, the upper or fixed portions being cathedral art glass while the lower portions are carried in rubber cushioned brass

sash and are adjustable to eight positions.

Each of the side and back window frames is equipped with a heavy friction controlled draw shade such as are used in railway cars. Two weather-tight ventilators and an adjustable windshield insure adequate ventilation under all conditions. Light weight and convenience of handling constituted the primary requisites of the design as this company feels that the traffic problems will ultimately be solved by highly mobile, medium-sized transportation units.

The wheelbase is 176 in., overall length is 21 ft. and the tread at the front is 56 in. When single tires are used at the rear, the tread is 57 in. As equipped with standard body, the total weight is 7150 lbs. This figure includes a body weighing 3400 lbs., which is the maximum recommended for other than standard bodies. On this basis, the total weight of the vehicle is pro-rated at 340 lbs. per passenger seat. As the list price of the complete vehicle is \$4850, the pro-rated price per passenger seat is \$231. Annual in-

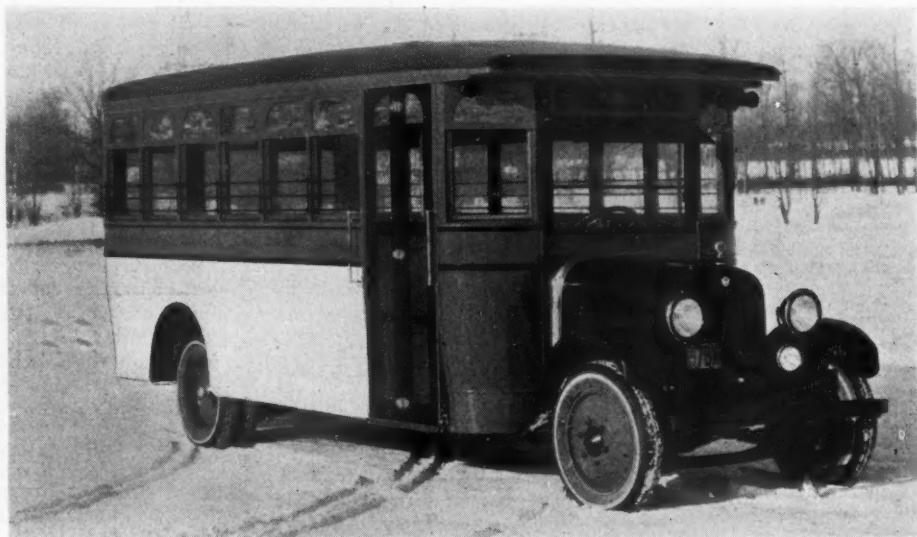
terest at 7 per cent on this amount is \$16.17.

In the sub-frame at the front are carried the engine and gear box, the engine being a standard Reo six cylinder of 3 3/16 in. bore and 5 in. stroke.

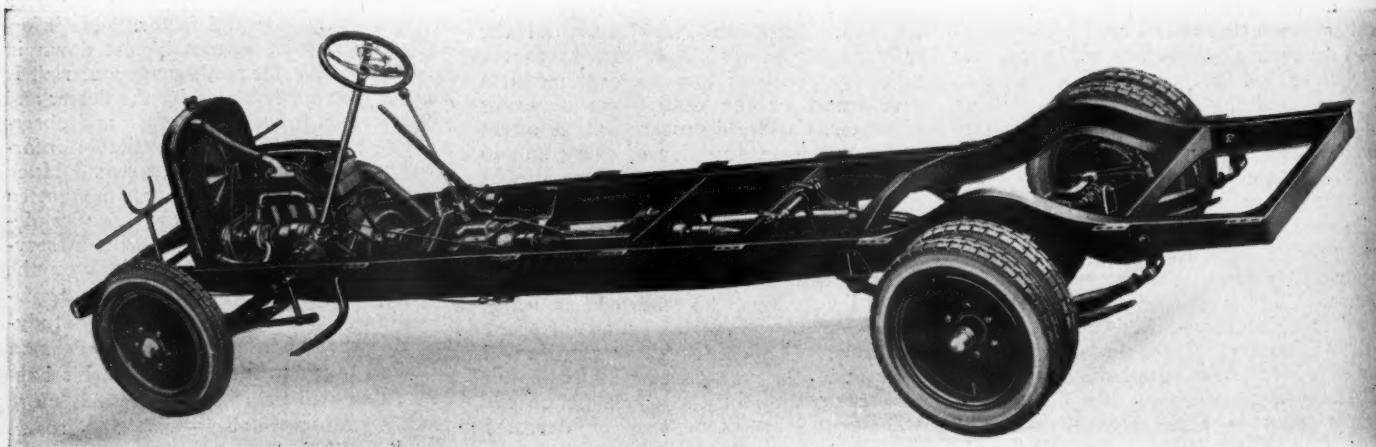
Starting, lighting and ignition are accomplished by the North East electric system. The generator is located at the left side of the engine just back of the water pump and carries the distributor head at its rear end. The starting motor is located on the right side of the amidships gear box and drives the spigot shaft through a chain, sprockets and over-running clutch. A Willard rubber thread, 6 volt, 153 ampere-hour storage battery is used in conjunction with the electrical system. A tubular radiator of conventional Reo design mounted on rubber blocks, rounds out the cooling system, the total capacity of which is 3 1/2 gal.

Chrome nickel drive shafts of 2 5/8 in. maximum diameter are used in the three-quarter floating rear axle which is pressed steel of banjo construction, the thickness

of stock being 7/32 in. with all joints riveted and welded. Standard taper roller bearings are installed at the differential and wheel bearings while the drive pinion of the spiral gear set is carried on steep angle taper roller bearings. The maximum road clearance under the housing is 8 in. when 30 in. tires are used. A hinged torque arm having a spring connection at the fifth cross member takes the driving and breaking reactions.



New Reo Bus With the Street Car Type of Body



Chassis for the New Bus Carries the Standard Reo Six Cylinder Engine. Note the Sturdy Chassis Frame

Ground or lapped gears of $\frac{7}{8}$ in. face are used throughout the gear box, which is rather conventional in design having three speeds and reverse with selective shift. In conjunction with a 5.7: 1 ratio at the rear axle the gear reductions are as follows:

Gear Box	Total
Low 3.68 to 1	21 to 1
Intermediate 1.8 to 1	10.3 to 1
Direct 1 to 1	5.7 to 1
Reverse 5 to 1	28.6 to 1

Both front and rear springs are semi-elliptic, the front being $2\frac{1}{4}$ in. wide and 38 in. long while the same dimensions for the rear are $2\frac{1}{2}$ and 54 in. respectively. Progressive rear springs adjust the spring characteristics to the load characteristics. All spring shackles are adjustable and are provided with Zerk high pressure oiling fittings which are used throughout for chassis lubrication.

Front and rear internal brakes are interconnected to form the emergency or hand braking system while the foot or service brake is connected to the contracting band brakes on the rear axle. Equalizers are provided throughout both braking systems. Rear brake bands are all 3 in. wide and the width of the front bands is 2 in., the thickness in all cases being $\frac{3}{16}$ in. The total area of all braking surfaces is 621 sq. in.

While the rear springs are underslung, the front springs are placed above the I-beam front axle which has the steering pivots inclined for approximately center-point steering. Taper roller bearings are used at the lower and upper pivot bearings as well as at the wheel spindles. Steering is accomplished by the Reo type bevel gear which actuates tubular fore-and-aft and cross links having enclosed ball joints at their ends.

Pressed steel is used for the frame which has a kick-up over the rear axle making the height of the top of the frame 22 in. above the ground. Five channel and two tubular cross members tie the side members together in a sturdy man-

ner being reinforced at the front by a heavy flat spring bumper, which is standard equipment. The wheelbase is 176 in. and the overall length is 21 ft. The frame extends back of the rear axle for $45\frac{1}{2}$ in. and any extension of the body back of this point is not recommended by the manufacturer. In fact, the standard body is supported by the frame throughout its entire length. Thirty inch pneumatics are used all around, single at the front and dual at the rear, the tread at the front being standard, 56 in. while the centers of the inside rear tires are 57 in. apart. Disk wheels are standard equipment.

General dimensions of the standard body are as follows:

Length, 197 in.; standing height, 72 in.; width, 87 in.; aisle width, $16\frac{1}{4}$ in.; floor to ground, $25\frac{1}{4}$ in.; door height, 74 in.; roof to ground, 90 in.; seat width, 32 in.; step height, $15\frac{1}{4}$ in.

A spare tire is carried on a fixture at the left of the driver's seat and the gasoline tank of 25 gal. capacity is mounted in the left front corner of the body with the filler cap outside.

A two piece adjustable windshield and two weather-proof ventilators along with windows adjustable to eight positions insure adequate ventilation at all times. Three rows of brass guard rails protect all of the window openings. A brass hand rail extends vertically from the floor to the ceiling just inside of the front door. The accessory equipment includes an automatic windshield wiper, rear view mirror, fire extinguisher and a complete set of tools which are placed in a compartment at the right front corner. Electric push buttons are located in each window pillar and are connected to the driver's stop signal. A destination sign is located above the windshield and has a clear opening of $4\frac{1}{8} \times 35\frac{1}{4}$ in. being lighted by three double contact, 4 c. p. bulbs.

Interior finish is white enamel paneled by mahogany strips. Advertising space is made available by the usual strips running lengthwise above the window open-

ings. Four dome lights equipped with 21 c. p. bulbs are located in the ceiling while a fifth which is placed above the door opening is switched on as the door is opened. All fuses are placed in two compartments on the windshield frame. Exterior lights include two green corner lamps of 4 c. p. at the front and two similar red lamps at the rear. In addition to the usual head and tail lamps, a stop lamp with a 21 c. p. bulb is also supplied. The control of the exterior lamps is separate from that affecting the interior illumination. The exterior of the standard body is finished in orange above and light lemon below the belt. The disk wheels are finished in orange and the hood and radiator and the front fenders in black enamel. The front door is finished in mahogany. A by-pass valve is placed in the exhaust line which diverts the exhaust heat through two heater lines in the interior of the car.

Carrying the Message of Service to the Small Community

(Continued from page 20)

chosen were: Victor Neilson, Boston; P. J. Durham, New York City; B. Frank Hall, Atlanta and G. J. Beattie, Toronto. J. Harry Hearnen was elected for a term of one year. P. J. Durham, New York City, was chosen to lead the association for 1924. The new president outlined his policies when he said that no one or a few, members or manufacturers, were to be favored but service advanced for all. E. S. Cowie, Kansas City, was elected vice-president, F. W. Duffeck, Toledo, treasurer, and J. Harry Hearnen, Trenton, secretary; G. T. McFarland was re-elected as executive secretary.

The meeting was well attended, there being present representatives from practically every state and there were also representatives of a number of manufacturers.



Views of the New Reo Bus. Seats Are Placed to Eliminate Uncomfortableness and Lack of Leg Room

The "weak sisters" in the Truck Industry have gone back to their old occupations and the strong manufacturers like Federal, and the Wise Distributors—like you, perhaps,—can make hay while the sun shines again.

What business needs and is buying NOW is low-cost-transportation—trucks that don't wear out and that's what Federal is selling in greater quantities than ever before.

Another
FEDERAL
"Means Another Satisfied User"

THE FEDERAL MOTOR TRUCK COMPANY
Detroit, Michigan.



EDITORIALS



Selling Transportation

THIS publication has been stressing the point repeatedly that the dealer should sell transportation and not trucks. It seems that some dealers do not comprehend the meaning of this. They have an idea that selling transportation is a very complicated business, requiring, for instance a large clerical force, or the hiring of a few specially trained individuals whose duties would be to get up for each prospect a large amount of information concerning his business, with recommendations that such and such size trucks should be used. The dealer visualizes this selling of transportation as a very intricate and expensive proposition. He may even call it a lot of bunk. He contends that as long as he has to meet this and that competition all the argument in the world will not change the buyer's attitude, especially when the latter is dickering on price and doesn't seem to be much interested in anything else. Naturally the dealer will meet with such cases. But the reason he gets into such deals is because he is selling trucks—not transportation.

Selling transportation means first of all that price will not be the determining factor of a truck sale, but how that truck fits the work. It means that if the owner needs a trailer instead of another truck—a trailer it shall be. If a winch or hoist would make the truck more efficient, sell the owner a hoist or winch. If the owner needs a special body with compartments in it to handle the load more expeditiously help the owner secure that body.

In selling transportation you are protecting your own interests, your own business. You are selling the owner a part of your knowledge in transportation. You are building up a reputation in your community as a man who knows the business of hauling goods, of transportation, via the highway. You are not just handling trucks. You are ready to sell that customer whatever he needs to do his hauling economically and with the least amount of waste effort and time. That is all there is to it. There is nothing super-human required of the dealer. It's simply a question of having the guts to do it. If you haven't tried the transportation selling method—try it. Make up your mind to put your business on a profitable basis. Stop trading your head off. Convince your customers that you are not here only for a few years, but that you are in business to stay. Let them know that you are not handling only the so-and-so truck but that you

can furnish everything they need and that you can solve their transportation problems. Establish yourself as transportation headquarters—drop the idea that you are simply selling truck units.

That is what we mean by selling transportation. After you get started selling transportation you will not go back to the old method.

Trading in the Motor Bus

ONE would imagine that the experiences some dealers have had in the past in making unprofitable trades on motor trucks, would teach some of them a lesson and that they would be reluctant to take the motor bus in trade. Unfortunately such is not the case. Already some dealers are kicking over the traces and are doing some unbusiness-like trading in motor busses.

Trading wild on motor busses is one of the most asinine things a dealer can do. One thing that stands in the way of a resale on the motor bus is its general appearance. If it were only the engine or the axle that needed overhauling to put the bus in good shape that would be an easy matter, but when the whole job looks as if it has been shot to pieces, isn't it the height of folly to take such a job in trade?

Therefore, the dealer should be very careful in taking the motor bus in trade. Even from a mechanical standpoint the dealer will have to watch his step, because if he resells a motor bus that is in doubtful shape mechanically, he will have more grief than he ever had with a truck job, especially with the operator who is just starting in the business. Continuous repairing of the motor bus will not help that owner make any more profit. His schedule will suffer and the saving he made by buying a second-hand bus will never be regained.

As a matter of fact, the average motor bus that is ready to be taken out of service is so worn out that it is junk and nothing else. Certainly no one else wants such a job. Usually the body is even in worse shape than the chassis and the only way to handle such a proposition is to have the entire vehicle dismantled and salvage what parts are serviceable and let the junk man take the remainder. Doping up a motor bus for resale will never pay any dealer. The comeback will be too disastrous. The dealer who is making fancy allowances on motor busses will soon make his acquaintance with the sheriff.

News of the Trade in Brief

Electric Truck Joint Exhibit Being Planned for N. E. L. A. Convention

Believing that a joint exhibit will do a great deal more than individual showings to emphasize that the electric truck manufacturers are primarily interested in selling electric truck transportation for that class of work to which it is best suited and that they are standing together to impress the central stations with the importance to them of a battery charging load, an Electric Joint Exhibit is being worked out for the N. E. L. A. Convention to be held at Atlantic City in May.

The Autocar Sales & Service Company, Commercial Truck Company, Walker Vehicle Company and the Ward Motor Vehicle Company have already agreed to exhibit together and in this they are assured the co-operation of the Electric Transportation Bureau, N. E. L. A. and the Society for Electrical Development.

It is probable that Sections 37 to 31 inclusive will be taken and the space will be so split up that the fore part of the exhibits will emphasize the idea of electric truck transportation while the individual exhibits of the manufacturers will form the background. More about this Joint Exhibit will appear in future issues.

Hallanger Made Manager of Motor Truck Industries, Inc.

William N. Hallanger of Detroit has been appointed manager of the Motor Truck Industries, Inc., an association of specialized motor truck manufacturers and allied parts makers. Mr. Hallanger pos-

sesses a broad financial, as well as industrial experience. He has been identified with several midwestern banks in various capacities. He entered the industrial field as assistant manager of Luiderman, Hoover & Co., stove and stamping manufacturers. In Detroit, he became known to the automotive industry while vice-president and general manager of the W. J. Burton Co., stamping and sheet metal manufacturers.

The Motor Truck Industries, Inc., has retained Mr. Hallanger to conduct its membership and promotional campaign. He is now located in the offices of the Association at the Capitol Bldg., 120 Madison Ave., Detroit.

Plans for a general meeting of Motor Truck Industries, Inc., are being worked out by Mr. Hallanger, at which the campaign for association activity during the year will be outlined. Date and place of the meeting will be announced later.

Export Trade Show Increase in January

The year 1924 opened with the export trade running practically double of the volume at the same time in 1923 and January of this year was well ahead of December. This is revealed in the monthly statistics of exports for the first month of the year, announced by the Automotive Division of the Bureau of Foreign and Domestic Commerce. Overseas shipments of passenger cars, totalling 12,614 in January compared with 10,069 in December and 6,040 in January of 1923. The truck exports were 2845 in January, 2066 in December and 1352 in January of the previous year.

Coming Events

Atlantic City, N. J., June 23 to 27, 1924—27th annual convention of the American Society for Testing Materials to be held at Chalfonte-Haddon Hall. C. L. Warwick, Secretary-Treasurer.

Bethlehem, Pa., March 31 to April 3, 1924—10th annual show to be held in the Coliseum. Trucks, tractors and accessories. James L. Elliott, Mgr., 1308 Broadway.

Boston, Mass., March 8 to 15, 1924—22d annual show of the Boston Automobile Dealers' Assn., Inc., Mechanics Bldg. Passenger cars, trucks, tractors and accessories. Chester I. Campbell, Mgr., 5 Park Sq., Boston.

Burlington, Vt., April 2 to 5, 1924—4th annual show of the Ethan Allen Club. Thos. W. Parkhill, Chairman.

Calumet, Mich., April 7 to 12, 1924 (tentative)—10th annual Upper Peninsula Auto Show of Central Storage Co., and automobile dealers, Coliseum (28,000 sq. ft.). Passenger cars, trucks, tractors and accessories. Joseph A. Savini, Mgr.

Goldsboro, N. C., April 21 to 26, 1924—4th annual show of the Chamber of Commerce and local automobile dealers at Co-operative Tobacco Warehouse. Passenger cars, trucks, tractors, accessories and industrial exhibits. W. C. Denmark, Sec., Box 546, Chamber of Commerce Bldg.

Transport Congress to Consider Railroad and Truck Co-ordination

An effort to interest railroads in foreign countries in the use of automobile trucks in short hauls, L. C. L. shipments and store deliveries, will be one of the big features of the World Motor Transport Congress to be held in Detroit. Plans to this end were gone over with the Automotive Division, by George F. Bauer, Secretary of the Foreign Trade Committee of the National Automobile Chamber of Commerce.

The present plan contemplates that the story of how motor trucks in the United States have supplemented short hauls and L. C. L. shipments will be carried abroad with the aid of the foreign representatives of the Automotive Division of the Department of Commerce. This phase of the work, Mr. Bauer states, will be thoroughly considered with the delegates to the Motor Transport Congress, being supplemented by properly directed information to potential truck users in foreign countries.

"The truck has become a big factor in the American scheme of transportation," Mr. Bauer declared, "and we are quite confident that we can demonstrate to the visiting delegates what an economic saving can be effected by a more general use of trucks."

Voters Favor the Motor Bus in Emporia, Kansas

Motor busses will be substituted for street cars as a result of the special election held in Emporia, Kan., recently. The majority was 353.

Green Bay, Wis., August 25 to 30, 1924—4th annual show of the Automotive Division of the Green Bay Association of Commerce. Automotive Bldg., Northeastern Wisconsin Fair Grounds (300,000 sq. ft.). Passenger cars, trucks, accessories and sport and auto apparel. W. E. Kerwin, Mgr., Bellin Bldg.

Louisville, Ky., May 8th and 9th, 1924—2d annual convention of the Hardwood Manufacturers Institute. Seelbach Hotel. J. M. Pritchard, Secretary-Manager.

New York, N. Y., April 19 to 26, 1924—Electric Truck Show under the auspices of The New York Edison Co., to be held in their building. 10,000 sq. ft. of space allotted. Electric trucks, accessories, batteries and charging equipment. C. R. Skinner, Jr., Mgr., 130 E. 15th St.

Oklahoma City, Okla., March 24 to 29, 1924—8th annual show of the Okla. City Motor Car Dealers' Assn. Passenger cars, trucks and accessories. Edgar T. Bell, Mgr., 403 Oklahoma Bldg.

Sacramento, Cal., August 30 to September 7, 1924—70th annual California State Fair, under the auspices of the State Board of Agriculture. Tent 100 x 350. Passenger cars, trucks, tractors and accessories in other tents. C. W. Paine, Sec.

Springfield, Ill., March 20 to 22, 1924—5th annual show of the Springfield Auto Dealers' Assn., at Springfield Arsenal. Passenger cars, trucks and accessories. Basil W. Ogg, Mgr., 213 East Capitol Ave.

Washington Heights, N. Y., March 26 to 31, 1924—Automobile show of the Washington Heights Automobile Dealers' Assn. H. G. Stiles, Mgr.

A. E. S. A. Forms a North-western Section

The Northwestern section of the Automotive Electric Service Association was formed at Minneapolis on Feb. 7 in the assembly rooms of Reinhard Bros. Co. Despite the inclemency of the weather there were many present and representing electric service stations in the adjoining states including Montana, South Dakota, etc. The following officers and committees were elected: Chairman, Ole Gregerson, Mason City, Ia.; vice-chairman, Palmer Grasse, Faribault, Minn.; secretary, P. W. Perlstrom, Minneapolis; treasurer, A. L. Price. These with G. E. McNicol, Fred Fowler, G. Holmgren and J. Carr constitute the executive committee. Among the speakers at the meeting was D. R. Thomas, secretary of the Twin Cities Credit Information Exchange who addressed the meeting on credits and the advantages of cash discounts. Owing to the distance many members will be obliged to travel it was decided to hold the section meetings semi-annually. G. T. McFarland, executive secretary of the A. E. S. A., organized the meeting and displayed and explained charts on electric unit equipment, production, etc., in the truck field.

Change in the Personnel of Autocar Company

The stockholders of the Autocar Company at their annual meeting in Ardmore, re-elected the same board of directors. The directors held their reorganization meeting the next morning and elected Walter T. Savoye a vice-president. John C. Taney was elected treasurer, succeeding Mr. Savoye, and Roscoe T. Anthony was elected secretary and assistant treasurer, succeeding Mr. Taney. Miss Mary H. McMonigle was added to the executive staff as assistant secretary and assistant treasurer.

Duplex to Resume Manufacturing at Lansing

Duplex Truck Co., will start manufacturing in its new plant at Lansing without the necessity for refinancing, said Joseph Gerson, president at the annual meeting of the company. Sale of its former plant to Reo Motor Car Co. for \$200,000 will enable Duplex to pay off its bank indebtedness, he said. This amounts to \$169,199.94. The company has a cash balance of \$30,000 and lists in its assets \$85,759.88 in notes receivable and \$89,504.30 in accounts receivable. There is also an inventory of \$240,569.64 taken at market valuations.

Besides the bank indebtedness the company owes \$13,779.14 in accounts payable and other items of accrued taxes and payrolls approximating \$2,500. The company will therefore be in position to resume manufacturing without additional capital, Mr. Gerson said, as soon as its new building is ready.

Orders for 30 trucks were turned in by Harry M. Lee, former president and gen-

eral manager, who is now in charge of sales. Mr. Lee obtained these orders on a recent two months' trip through the east. Other business is promised in other quarters, said Mr. Gerson, and altogether the prospects for the company are very good.

The old board of directors with the exception of Harry J. Sproat, who resigned, were re-elected, the vacancy being filled by the election of A. C. Pratt.

Meixell Leaves Conference Committee; Huffman Successor

Harry Meixell has resigned the secretaryship of the Motor Vehicle Conference Committee to accept the position of general manager of the Mortgage and Title Guaranty Company of New Jersey, effective March 1. He also leaves the post of secretary of the Legislative Committee of the National Automobile Chamber of Commerce.

Russell Huffman who has been assistant to Mr. Meixell in these offices succeeds him. Mr. Huffman is a graduate of Columbia University Law School.

The Motor Vehicle Conference Committee is a group of delegates from motor user, dealer, and manufacturer organizations, the purpose of which is to study, formulate, and recommend principles of equitable and efficient motor vehicle regulation. The participating members of the committee are the American Automobile Association, the National Automobile Dealers' Association, the Motor and Accessory Manufacturers' Association, the Rubber Association of America, and the National Automobile Chamber of Commerce.

Bill Carries Large Highway Improvement Fund

A total of \$56,758,513, of which \$17,700,000 would be available for the improvement of highways during the coming fiscal year, is carried in the annual agricultural bill, favorably reported to the House in February by the House Appropriations Committee. The total of seventeen millions of dollars for highway construction is \$16,082,940 less than the appropriation a year ago when \$32,300,000 was allotted for state aid road construction and is \$471,312 less than the budget estimate.

The committee's report in dealing with expenditure of Federal funds for highway improvement brought out that since 1917. Federal appropriations to the amount of \$392,817,500 have been made available to the States, of which \$284,380,399 had been paid to the States prior to January 1st last.

Estimating that expenditures are being made during this fiscal year at the rate of \$6,000,000 a month, the committee went on the theory that \$72,437,160 would be available July 1 for expenditure in the coming fiscal year in addition to the \$17,700,000 carried in the bill.

Standard Oil of New Jersey to Distribute Ethyl Gas in East

Under a contract which is being negotiated between the Standard Oil Co. of New Jersey and the General Motors Corp., the former will act as distributor in the eastern part of the United States for ethyl gas, the anti-knock mixture developed by the General Motors Research Corp. at Dayton. As soon as the necessary arrangements can be made the Standard Oil Co. of New Jersey will carry ethylized gasoline at its own filling stations and also will supply it to other petroleum marketing companies which at the option of the purchasers will add ethyl in the correct proportion to gasoline supplied.

It is understood that General Motors will install ethylizers on the gasoline pumps of the oil companies so that motorists can buy their gasoline either plain or ethylized. This ethylizer will be a glass container with measuring equipment attached to deliver the proper quantity of ethyl required for the amount of gasoline purchased. This will be a preliminary step, for if the mixture proves as popular as expected the ethyl will be mixed with the gasoline at the refineries.

S. A. E. to Hold Summer Meeting in New Jersey

Spring Lake, N. J., has again been chosen for the summer meeting of the Society of Automotive Engineers. The sessions will be held June 24 to 27.

It has been definitely decided to hold the S. A. E. annual meeting in Detroit next January, while the motor transport session is scheduled for New York in May. A joint service meeting with the National Automobile Chamber of Commerce will be conducted in Cleveland, November 18 to 19, and the production meeting will be held in Detroit, October 21 to 24.

Gasoline Makes New Production Record in 1923

Gasoline production in the United States during 1923, amounted to 7,555,945,143 gallons, establishing a new high record, and represents an increase of 21.83 per cent over the 1922 production. Figures of the bureau of mines show that the domestic demand was, for the year, 6,685,035,280 gallons, of which 5,404,184,000 gallons were consumed by motor vehicles.

While the increase in production was 21.83 per cent over the previous year, the figures reveal, that the consumption was 26.64 per cent, indicating that consumption gained on the production slightly during the year. Exports of gasoline during 1923 totaled 871,116,614 gallons.

Stock on hand January 1, was 1,074,899,650 gallons, an increase for the year of 191,106,789, or 21.62 per cent, and imports totaled 191,313,540 gallons, a gain of 207.91 per cent. The December output, 659,168,606 gallons, was a new monthly record.

Advanced Plans Announced for New York's Electric Truck Week

New York City's annual Electric Truck Show will be held again this year in the show rooms of the New York Edison Co., Irving Pl. & 15th St., April 19th to 25th. The plans provide for what will be virtually an Electric Truck Week, introduced by an electric truck parade down Fifth Ave. on April 19th, with each day designated to show the application of the electric truck in a specialized industry and to include further an electric truck luncheon under the auspices of the New York Electrical League on April 23rd.

Special invitations will be issued to users of transportation in the metropolitan district, asking that they attend the show on the day set aside for their particular industry.

The following schedule has been decided upon: April 19, Warehouse Day; April 21, Department Store Day; April 22, Laundry Day; April 23, Public Service Day; April 24, Bakery Day; April 25, Ice Cream and Dairy Day; April 26, Provision Dealers' Day.

Gotfredson Interests Purchase Harroun Motor Plant

The Gotfredson interests, which include the Gotfredson Truck Corp., of Detroit; the Gotfredson Truck Corp., Ltd., of Walkerville, Ontario; the American Auto Trimming Co., of Detroit; the American Auto Trimming Co., Ltd., of Walkerville, Ontario, and the American Auto Trimming Co., of Cleveland, Ohio, and the Gotfredson Land Co., of Detroit and Ypsilanti, Mich., have purchased the Harroun motor plant, with the idea of ultimately making it the home of the Gotfredson Truck Corp.

The truck met with much favor in the British Isles and the export business is very satisfactory. The company recently opened a factory sales and service branch in Los Angeles, Cal., and also one in Cleveland, Ohio. In connection with the Canadian company, sales and service branch is maintained at Toronto, Ontario, Montreal, P. Q. and Winnipeg, Manitoba.

New York Boosters Latest Addition to Fold

Carrying out the suggestion made at the January meeting of the Boosters Club, N. E. No. 1 that a metropolitan club be formed, the New York members of the original club to the number of 24 met February 23d at the Empire Hotel and organized the Automotive Boosters Club No. 13, New York City.

The election of president resulted in the unanimous choice of Earl V. Hennecke, vice-president and general manager, the Moto-Meter Co., Inc. In his speech of acceptance Mr. Hennecke stressed the value of the Booster clubs in promoting the automotive industry and stated that the New York club because of its location could do big things. H. B. Sullivan, Manley Mfg. Co., was chosen as vice-

president and William Kandell, Arkay Sales Co., treasurer. Horace N. Eckhouse was elected secretary. The board of governors consist of John Cooper, Walker Mfg. Co.; C. P. Shattuck, Chilton Company; B. M. Asch; J. C. McAdams, J. C. McAdams Sales Co., and R. C. Crooker, McKinnon Chain Co.

The constitution and by-laws of N. E. No. 1 were adopted temporarily but these will be amended slightly. The club extended a vote of thanks to the organization committee consisting of John Cooper, William Kandell, Henry Biren, H. B. Sullivan and C. P. Shattuck.

SOME OUTSTANDING COMING EVENTS

- April 19 to 26, 1924, New York City—Annual New York Electric Truck Show, Showrooms of the New York Edison Co.
- May 19 to 23, 1924, Atlantic City, N. J.—Electric Truck Joint Exhibit at the N. E. L. A. Convention, Million Dollar Pier.
- May 19 to 23, 1924, Detroit, Mich.—Automotive Maintenance Equipment Show and National Automotive Service Convention, General Motors Building.
- May 21 to 24, 1924, Detroit, Mich.—World Motor Transport Congress.

Motors Metal Experiencing Business Increase

At the regular annual meeting of the Motors Metal Manufacturing Co. the following directors were elected: C. R. Talbot, Geo. G. Harris, Geo. E. Roehm, F. C. McMath, Willard Pope, Lloyd N. Allen, Wm. Christian, F. G. Christian, Robt. R. McMath, Dr. T. F. Buttrick, H. A. Burnett.

At the directors meeting which followed, Geo. E. Roehm was elected president; Wm. Christian, vice-president; Robt. R. McMath, treasurer and general manager; N. C. Johnson, secretary; F. B. Fick is sales manager and G. S. Burke is purchasing agent.

The company reports a gratifying increase in business on its standardized fenders and hoods for trucks, a product which was introduced quite recently. They have also secured several contracts on quality fenders and hoods from passenger car manufacturers, who formerly made their own.

In addition to these products the company does a substantial business in body panel stampings for several well known makers.

Truck Dealer Heads Norfolk Association

At a meeting of the Norfolk Automobile Dealers' Association of Norfolk, Va., an election of officers made necessary by the death of its former president, Arthur W. Depue, was held. E. E. Springer, local Federal truck distributor, was elected president; R. C. Taylor, Buick dealer; vice-president; B. R. Wren, Dodge dealer, treasurer and I. B. Wicks, Reo dealer, secretary.

New Haven and Hartford Plans Additional Gasoline Coaches

Satisfied with the results obtained through the operation of three motor rail coaches which it put into service two years ago, the New York, New Haven and Hartford Railroad has ordered ten new units, each of which will accommodate 60 passengers and carry 200 pounds of baggage and will be powered with a 120 hp. six-cylinder engine.

It also is reported to the N. A. C. C. that the Canadian National Railroad is experimenting with a high-powered motor coach which is driven by a 225 horsepower gasoline engine and which seats fifty-five passengers. There is a baggage compartment 15 ft. 2 in. long and the coach has a steel body differing from most rail motor coaches, which generally have bodies built on a standard motor bus style. The car weighs between 40,000 and 45,000 pounds.

The Chamber reports that whereas there were only forty railroads operating motor rail coaches in 1922, there were 157 using them the first of the year, an apparent increase of 400 per cent.

Worthington Scranton Made President of MacCar

Philo Butler and L. H. Conklin have been added to the board of directors of the MacCar Truck Co., Scranton, Pa., with the election of Worthington Scranton as president and R. H. C. Rupp and B. A. Guy as vice-presidents. An executive committee composed of several members of the board will direct the affairs of the company with the counsel of an advisory committee composed of prominent bankers and manufacturers.

Mr. Guy, who has been named general manager, has had a long and successful experience in the automotive industry. His previous associations have been with the Garford Motor Truck Co., Curtiss Airplane and Motor Co. and International Motors.

Mr. Rupp will be left free to devote his attention to sales promotion and financing. He is the author of a sales financing plan which has been signally successful.

Hayes Wheel to Acquire Accessory Concerns

C. B. Hayes, president of the Hayes Wheel Co. announced that stockholders will vote at the annual meeting March 25th on a proposal to acquire through exchange of stock, the outstanding stocks of the Hayes Truck Wheel Co. of St. Johns, Mich. and Albion Bolt Co. of Albion, Mich., and the Morrison Metal Stampings Co. of Jackson, Mich., the latter two companies contributing directly to the Hayes Wheel Co. parts for wheels. None of these companies have any mortgage or debenture debt and all are in strong current financial position.

Statistics on Brake Linings and Clutch Facings to be Published

Members of the Asbestos Brake Lining Association, a national organization of manufacturers, at their monthly meeting, held at the McAlpin, New York City, on Feb. 13th, decided to unite in the co-operative publishing of what is known as the Standard Data Book, which will contain the 1924 statistics relating to brake linings and clutch facings.

It is estimated that the members will save about \$15,000,000 per year as a result of this innovation. In the past each member has had a printer produce this catalogue. In the future one printer will produce the edition for the entire membership. Each firm will have its own individual cover and inside advertising matter but the statistics will be uniform.

It also was decided to have the association collect, revise and collate all of the statistics, instead of each member writing individual letters to the various automobile manufacturers.

The membership of the association now includes fifteen manufacturers, against ten which was the original number when the organization was started about a year ago and selected A. A. Mowbray to serve as commissioner of the industry.

Electrics Show Large Percentage of New Sales

Among the orders for electric trucks which have been taken in New York City since the first of the year 33 per cent represent new users—a healthy indication for the industry since it is a well established fact that 75 to 80 per cent of each year's purchases represent "repeat orders." It is an indication of real progress, therefore, that the number of first users is constantly increasing.

Dart Truck and Tractor Ordered Sold

Receiver W. H. Johnson, believing a reorganization is impossible, announces that Judge Boies has issued an order for the sale of the assets of the Dart Truck & Tractor Corp., Waterloo, Ia., on March 19th. This company was one of the first to enter the field of truck manufacturing and has operated as the Dart Mfg. Co., Dart Motor Truck Co. and the Dart Truck & Tractor Corp. It was placed in the hands of a receiver May 21, 1921.

Automotive Division to Release Traffic Data

Automotive tariff information concerning every country in the world soon will be made available for exporters, according to a statement made by Percy Owen, recently appointed chief of the automotive division, Bureau of Foreign and Domestic Commerce. Mr. Owen was guest of honor at a luncheon participated in by the Overseas Club of the Automotive Boosters and the N. A. C. C., M. A. M. A. and

Rubber Association export managers. About fifty automotive men, interested in foreign trade, listened with satisfaction to Mr. Owen's statement that an immediate effort would be made to put into the Export Manual, recently developed by the automotive division, complete information for the whole world on tariffs and on a few other important topics instead of concentrating on a few countries and trying to give a very detailed outline.

I. H. C. Distributes Prizes in Annual Sales Contest

Thirty-one \$1000 prizes have been distributed by the International Harvester Co. among dealers who have owned and operated for six months or more at least one Red Baby motor truck. The \$1000 prize in each region went to the dealer who had the greatest increase in sales of all of the items in the fifty-four McCormick-Deering line over his base.

The State prize winners were as follows:

Boutwell's Garage, Concord, N. H.; John P. Rankl, Marlboro, Conn.; George A. Teed, Katonah, N. Y.; Fowler & Fowler, Indiana, Pa.; H. B. Myers Co., Annapolis, Md.; Nesbit & Blount, Hillsboro, O.; Fox Brothers, Fowler, Mich.; Orange Hardware Co., Orange, Va.; H. P. Eiford, Albermarle, N. C.; Evans Implement Co., Atlanta, Ga.; Hickman Hardware Co., Hickman, Ky.; Keiser Nailling Implement Co., Union City, Tenn.; White Hardware Co., Uniontown, Ala.; Texarkana Mill & Implement Co., Texarkana, Ark.; C. N. Barker, Noblesville, Ind.; Hamilton Riley, Clinton, Ill.; Minton, Wedel & Carter, Dexter, Mo.; J. H. Schuster, Bernard, Iowa; Wagner & Bartzen, Erdman, Wis.; Nevenheim & Anderson, Canby, Minn.; Farmers Implement Co., Forbes, N. D.; Geddes Implement Co., Geddes, S. D.; Evans Mercantile Co., American Falls, Idaho; C. F. McGreevy, Tekoa, Wash.; W. M. Stebbins, Gothenburg, Neb.; Ed James & Son, Beloit, Kas.; Troutt Brothers, Carnegie, Okla.; Hayes-Sammons Hardware Co., Mission, Tex.; Moody-Warren Commission Co., Fort Collins, Colo.; Cache Co., Logan, Utah; Holser & Bailey, Santa Maria, Cal.

Revised Figures Show 376,106 Trucks Built in 1923

Revised production figures of the automobile industry show that the 186 actively engaged manufacturers in January produced a total of 316,093 passenger cars and trucks, compared with 243,539 in January 1923, and 91,272 manufactured in January 1922. For the entire year of 1923, revised figures of the U. S. Department of Commerce show that the year's production of passenger cars was 3,636,767, as against 2,339,768 in 1922, while revised truck output totaled 376,106 in 1923, as against 246,281 in 1922.

The total figures on production for last year and January of this year, with comparison for 1922, which also includes fire apparatus and street sweepers, are as follows:

	Passenger Cars			Trucks		
	1922	1923	1924	1922	1923	1924
January	81,696	223,819	287,296	9,576	19,720	28,797
February	109,171	254,773		13,350	22,161	
March	152,962	319,770		20,025	35,260	
April	197,224	344,639		22,640	38,056	
May	232,462	350,410		24,097	43,678	
June	263,053	337,362		26,298	41,145	
July	225,086	297,330		22,046	30,663	
August	249,492	314,373		24,692	30,829	
September	187,694	298,911		19,462	28,638	
October	217,566	325,023		21,795	30,166	
November	215,352	*284,923		21,949	*28,070	
December	208,010	*275,434		20,354	*27,720	

*Revised.

Kelsey Will Reply to Unfair Competition Charges

Kelsey Wheel Co. will make formal reply to charges of unfair competition filed against it with the Federal Trade Commission at Washington by March 20th in which it will deny allegations made against it and will submit in detail a study of conditions in the sales and service field of the wheel business.

The company's relations and contract with its dealers are strictly in keeping with such relations in the automotive industry generally, the company declares, and it cannot be held for practices by individuals so long as the contract terms are not violated. Its dealers are given sales and service rights in their territories as in the case of most automotive products. The absence of competition from other dealers handling the same products in the same territory is common in the industry.

Under the law whenever the Commission has reason to believe that an unfair method of competition has been used against the public interest, it must issue its complaint. However, the question whether or not such method has been used is not passed upon by the Commission finally until after respondents have had thirty days in which to answer and the issue has been tried out.

Excellent Attendance at Meeting of Boosters No. 1

The monthly meeting of the Boosters Club, N. E. No. 1, was held at Boston on February 17th with an excellent attendance. The club approved of the withdrawal of its New York members who are to form a Booster Club in that city. H. B. Sullivan, representing the proposed club, expressed his regrets in severing affiliation and assured the New Englanders of the high regard of the New Yorkers for the New England organization and its members. Plans were promoted for the annual meeting which will be held at Boston on March 11th. At this time the national organization will be effected.

The Chicago Garage Owners' Association at its meeting in February officially sanctioned the proposal to charge for storage in advance and to put all garages in Chicago and Cook County, members of the association, on a strictly cash basis. A committee of five was appointed to work out a plan for providing first aid to disabled cars.

Personal Items

Roy D. Baker, of the Baker Equipment Co. 1631 Elmhurst Ave., Detroit, Mich., has taken on the complete line of the Wisconsin Truck Co. of Madison, Wis., for the State of Michigan.

E. J. Cosgrave, formerly New York representative of the Cox Brothers Manufacturing Co., has been appointed New York manager of the Eaton Axle & Spring Co., in charge of the Perfection spring service station at 616 West 56th St., and the Eaton bumper show rooms at 1846 Broadway.

A McK. Flint has resigned as sales manager, central division, of the United States Chain & Forging Co., Pittsburgh. No announcement is made as to his future business plans.

John H. French, former president and general manager of the Michigan Stampings Co., Detroit, and **Walter F. Tant**, former secretary and treasurer, were guests at a testimonial dinner given at the Detroit Athletic Club by forty employes of the company which has recently been taken over by the Briggs Manufacturing Co.

R. C. Ives has been appointed zone sales manager at St. Louis by Chevrolet Motor Co., succeeding **C. C. Nangle**, who is transferred to the post of assistant to **R. W. Fuhr**, regional sales manager in the St. Louis territory.

J. Ross Jennings, former field secretary of the Automotive Equipment Association, has joined the staff of the Motor and Accessory Manufacturers' Association in a similar capacity, following the promotion of Field Secretary **A. W. Barber** by General Manager **M. L. Heminway** to the newly created post of trade observer.

R. M. Kincaid has resigned as works manager of the U. S. Light & Heat Corp., of Niagara Falls, N. Y., **J. K. Gould** taking over that part of his work having to do with the manufacture of batteries, and **Otto Von Goeben** carrying on the device and arc welder end of the business. **Mr. Kincaid** resigned to join the forces of the Garford Motor Truck Co., of Lima, Ohio.

G. L. Livingston has been named export manager for the Mason Tire & Rubber Co. of Kent, Ohio. Livingston was formerly export advertising manager for the Firestone Tire & Rubber Co. Although at present maintaining headquarters at Kent, the company's export office will shortly be removed to New York and overseas sales directed from that point.

S. S. Miller has been elected president and general manager of the Mohawk Rubber Co., of Akron, Ohio, at a recent meeting of the Board of Directors. **S. F. Jones** also assumes the office of sales manager.

V. C. Page, who for the past three years has been sales manager of the F. A. Ames Co., Owensboro, Ky., has become associated with the Motor Products Co., Detroit, and will have in charge the development of the motor accessories division in its national distribution.

Harry M. Robins, who has been a member of the Dodge Bros. sales organization since 1914, has resigned as director of foreign sales of Dodge Bros. He was originally with the Continental Motors Corp. where he had been advertising manager.

Granville P. Rogers, resigning as general sales and advertising manager of the Pyrene Manufacturing Co., of Newark, N. J., has been named as vice-president and director of sales of the Kant Rust Products Corp., of Rahway, N. J., in which he has a financial interest. Mr. Rogers makes the change after six years with the Pyrene Co.

E. B. Shoemaker has been appointed field sales manager of the Bethlehem Spark Plug Co. Mr. Shoemaker has begun a trip which includes a visit to each of the company's 42 district managers.

Lon R. Smith, widely known as a merchandising executive in the industry, has been made president and general manager of the Columbia Motors Co. succeeding **J. G. Bayline**, who has retired. **Fred Wilson**, who has been with Mr. Smith in the firm of Smith & Wilson, Inc., Indianapolis, Ind., also goes to Columbia Motors as sales manager.

R. M. Williams has been appointed service engineer of the Packard Motor Car Co. He fills the position left vacant by **H. B. Knap**.

F. C. Zillman, who has managed successfully the Illinois Automotive Trade Association, announces his resignation to become connected with the Phoenix Hosiery Co., Milwaukee, Wis. He is succeeded by **C. W. Coons**, who has had a wide experience in association work.

General Parts Corp., Detroit, has been organized in Flint to produce and deal in parts for cars manufactured by companies now out of business. The company to some extent is an outgrowth of the former Paterson Automobile Co. The officers are **L. H. Bridgeman**, president; **Frank Lay**, secretary, and **Dallas Winslow**, treasurer.

The Acklin Stamping Co., Toledo, Ohio, which manufactures pressed steel automobile steering wheel spiders in addition to other pressed metal parts, is building a new plant at Nebraska Ave. and the New York Central Railroad, which is to cost a quarter million dollars. It will be 600 x 150 ft.

Burgess-Norton Mfg. Co., Geneva, Ill., have placed a warehouse stock in Bush Terminal Bldg., No. 58, Brooklyn, in charge of **W. F. Decker** and **W. H. Reynolds**, sales representative, eastern territory. A distributing branch also has been opened at 21 W. Peachtree St., Atlanta, Ga., under the supervision of **E. H. Britton**.

Literature

Houpert Machine Co., Long Island City, N. Y., has announced a new booklet on its Special Light Weight Pistons. The booklet also contains detail piston and motor specifications of the various makes and models of passenger cars and trucks.

Waukesha Motor Co., Waukesha, Wis., has issued a booklet describing its new Ricardo Head. Full explanation with illustrations of this head, which involves the turbulence principle, is given in detail.

Link Belt Co., Michigan and Holmes Aves., Indianapolis, Ind., has issued Book No. 745 which illustrates in detail various kinds of chains this company makes. Illustrations of the popular cars are shown with a cut-out view of the radiator showing the chain drive arrangement.

Dearborn Equipment Co., of Kalamazoo, Mich., is issuing a pamphlet on Service Station Equipment. Catalog No. 101 contains necessary equipment for the Ford, Chevrolet and Buick motor cars and also for the Fordson tractor.

Champion Pneumatic Machinery Co., Chicago, Ill., is issuing catalog 16, to the trade. This contains detail descriptive matter regarding the Champion Compressors and compressor accessories. Some interesting tables and several illustrations make the catalog interesting.

Mossberg Wrenches are described in detail in a 48 page illustrated catalog issued for the year of 1924 by the Frank Mossberg Co. of Attleboro, Mass. In addition to the description there are three tables with plans of the Ford, Chevrolet and Dodge chassis showing the various sizes of nuts, bolts and screw heads used and illustrating the various wrenches adaptable for each fitting.

Appreciation is the title given to a beautiful pamphlet published by the Black & Decker Mfg. Co. of Towson Heights, Baltimore, Md. It is a brochure containing several letters from jobbers in the United States and Canada, regarding the Black & Decker line of automotive equipment.

Atlas of Traffic Maps is a book containing detail information of the various traffic maps of the world. Motor routes of the United States from coast to coast, inland waterways and railroads are all mapped out clearly. Steamship traffic throughout the world, parcel post units and zones, an industrial map and sources of state and world traffic are also illustrated in detail. It is published by the La Salle Extension University, University Press, Chicago, and costs \$4.50.



William L. Ferrier

Who was formerly secretary of the Fred Campbell Auto Supply Co., St. Louis, Mo., has been appointed factory representative of the Burd High Compression Ring Co., for Missouri, Arkansas and Kansas.

Trade Changes

The Pressed Metal Co., Pawtucket, R. I., has been organized by Dutee Flint, Darius Goff, R. W. Reid and others to manufacture Ford fenders. Mr. Flint is Ford distributor in Providence and operates his own steamer for the purpose of bringing Ford cars from the Kearny plant to Providence.

The Steel Wheel Co., New York City, exclusive representative of the Motor Wheel Corp., of Lansing, Mich., has moved its offices and warehouse to 507 West 56th St., where it has established a service station for repairing and replacing steel wheels now in use and for the installation of small-diameter wheels for low pressure or balloon tires.

The Pittsburgh Motor Parts Co., has moved to a new place of business at 127 S. Beatty St., Pittsburgh, Pa. The company was originally at 326 Liberty Ave.

The Carborundum Co., of Niagara Falls, N. Y., has completed plans for the erection of a new factory building to cost approximately \$300,000. The building will be 200 ft. long, 62 ft. deep with three stories and basement and will be modern in every respect.

South Side Reo Sales Co., of Chicago, Ill., has bought the entire block between Blackstone and Dante Aves. on E. 75th St. Provision will be made for a 200 car service station in a building which is now being planned.

Grigsby-Grunow-Hinds Co. is located now in its new factory at 4540 Armitage Ave., Chicago, Ill.

Replacement Table—Corrected Monthly

Including Piston Ring Sizes, Carburetor Sizes, Hose Sizes, Fan Belt Sizes, Brake Lining Sizes and Truck Frame Dimensions

* Note: Under Carburetor Inlet Diameter Will be Found Either the Size of Main Air Intake or the Gasoline Fuel Line
Fan Belt Type: V—V-Shape, F—Flat, R—Round

NAME, MODEL AND TONNAGE	ENGINE								BRAKE LINING						FRAME									
	Piston Rings		Carburetor		Upper Hose	Lower Hose	Fan Belt		Service		Emergency		Length		Width		Length		Width					
	No. per Cyl.	Width	Outlet Diameter	Inlet Diameter *	Vertical or Horizontal	Length	Width	Length	Width	Type	Length	Width	Thickness	No. of Pieces	Length	Width	Thickness	No. of Pieces	Back of Driver's Seat	Driver's Seat to Center of Rear Axle	Length	Width		
Ace 40-1½...	3	1	1	1	V	7	1¾	8	1¼	40 ¼	2	F	12	3 ¼	¼	4	12	3 ¼	¼	4	122 ¼	76 ¾	215 ¼	32
Ace 60-3...	3	1	1	1	V	10	2	15	1 ½	42 ½	2	F	13 ½	3 ½	¼	4	13 ½	3 ½	¼	4	Opt	84 ½	241	9 ½
Acme 20L-1...	3	1	1	1	V	7	1 ½	11	1 ½	34	1 ½	F	12	3	¼	2	12	3	¼	2	108 ½	63 ¾	200	34
Acme 40-2...	4	1	1	1	V	8	1 ½	11	1 ½	40	1 ½	F	12	3 ¼	¼	2	12	3 ¼	¼	2	123 ¾	74 ¾	208	34
Acme 40L-2...	4	1	1	1	V	11 ½	1 ½	12 ½	1 ½	39 ½	1 ½	F	13	3 ½	¼	2	12	3 ½	¼	2	123 ¾	74 ¾	214 ½	34
Acme 60-2 ½...	4	1	1	1	V	11 ½	1 ½	12 ½	1 ½	39 ½	1 ½	F	13	3 ½	¼	2	13	3 ½	¼	2	132 ¾	79 ¾	223 ½	34
Acme 60L-3...	4	1	1	1	V	11 ½	1 ½	12 ½	1 ½	41 ½	1 ½	F	13	3 ½	¼	2	13	3 ½	¼	2	140 ½	79 ¾	235 ½	34
Acme K (Bus)...	3	1	1	1	V	12	1 ½	12	1 ½	34 ½	1 ½	F	15 ½	3 ½	¼	2	15 ½	3 ½	¼	2	220 ½	127 ¾	312	41 ½
Acme 90-3 ½...	4	1	1	1	V	10	1 ½	12	1 ½	41 ½	1 ½	F	15 ½	3 ½	¼	2	15 ½	3 ½	¼	2	150 ½	95 ¼	243	36
Acme 90L-4...	4	1	1	1	V	10	1 ½	10	1 ½	40 ½	1 ½	F	18	4	¼	2	18	4	¼	2	159 ¾	99 ¾	261	37
Acme 125-5...	4	1	1	1	V	10	1 ½	10	1 ½	40 ½	1 ½	F	29	4	¼	1	46 ½	2 ½	¼	1	108	60	207 ½	33
American-LaFrance 1R...	3	1	1	1	V	9	1 ½	9	1 ½	45	1 ½	F	17	3	¼	4	17	3	¼	4	132	81	242 ½	33
American-LaFrance 2R...	3	1	1	1	V	9	1 ½	9	1 ½	40 ½	2	F	17	3	¼	4	17	3	¼	4	156	98	266 ½	33
American-LaFrance 2R...	3	1	1	1	V	9	1 ½	9	1 ½	40 ½	2	F	17	3	¼	4	180	110	290 ½	33				
American-LaFrance 2R...	3	1	1	1	V	9	1 ½	9	1 ½	40 ½	2	F	17	3	¼	4	18	4	¼	4	118 ½	81	216 ½	33
American-LaFrance 3R...	3	1	1	1	V	11 ½	1 ½	9	1 ½	42	2	F	11 ½	8	¼	2	21	4	¼	4	144	90	244 ½	33
American-LaFrance 3R...	3	1	1	1	V	11 ½	1 ½	9	1 ½	42	2	F	11 ½	8	¼	2	21	4	¼	4	168	104	268 ½	33
American-LaFrance 3R...	3	1	1	1	V	11 ½	1 ½	9	1 ½	42	2	F	11 ½	8	¼	2	21	4	¼	4	192	114	292 ½	33
American-LaFrance 3R...	3	1	1	1	V	11 ½	1 ½	9	1 ½	42	2	F	11 ½	8	¼	2	21	4	¼	4	210	125	310 ½	33
American-LaFrance 3R...	3	1	1	1	V	11 ½	1 ½	9	1 ½	42	2	F	11 ½	8	¼	2	21	4	¼	4	104 ¾	71 ¾	211	35 ½
American-LaFrance 3R...	3	1	1	1	V	11 ½	1 ½	9	1 ½	42	2	F	11 ½	8	¼	2	21	4	¼	4	123	90	229 ½	33
Armleder 21-1½...	4	1	1	1	V	12	1 ½	10	1 ½	31 ½	1 ½	F	11 ½	3 ¼	¼	4	11 ½	3 ¼	¼	4	Opt	Opt	Opt	32
Armleder 40B-1½...	4	1	1	1	V	10	1 ½	11 ½	1 ½	33 ½	2	F	11 ½	3 ¼	¼	4	11 ½	3 ¼	¼	4	Opt	Opt	Opt	32
Armleder 40C-1½...	3	1	1	1	V	8 ½	1 ½	11	1 ½	34	1 ½	F	11 ½	3 ¼	¼	1	15 ½	3 ½	¼	8	Opt	Opt	Opt	36
Armleder KWB-3 ½...	4	1	1	1	V	12	2	16	1 ½	35 ½	2	F	37	3	¼	1	15 ½	3 ½	¼	8	Opt	Opt	Opt	36
Armleder KWC-3 ½...	3	1	1	1	V	10	1 ½	16	1 ½	35 ½	2	F	37	3	¼	1	15 ½	3 ½	¼	8	Opt	Opt	Opt	32
Armleder HWB-2 ½...	4	1	1	1	V	10 ½	1 ½	11 ½	1 ½	33 ½	2	F	13	3 ½	¼	4	13	3 ½	¼	4	Opt	Opt	Opt	32
Armleder HWC-2 ½...	3	1	1	1	V	8 ½	1 ½	11 ½	1 ½	34	1 ½	F	13	3 ½	¼	4	13	3 ½	¼	4	Opt	Opt	Opt	32
Atterbury 20R-1 ½...	4	1	1	1	V	12	1 ½	14	1 ½	38 ½	1 ½	F	11 ½	3 ¼	¼	4	11 ½	3 ¼	¼	4	122 ½	72 ½	211 ½	34
Atterbury 22R-2 ½...	4	1	1	1	V	10 ½	1 ½	16	1 ½	40 ½	1 ½	F	13 ½	3 ½	¼	4	13 ½	3 ½	¼	4	129 ½	78 ½	225	34
Atterbury 22D-3 ½...	4	1	1	1	V	10 ½	1 ½	16	1 ½	40 ½	1 ½	F	15 ½	3 ½	¼	4	157 ½	80 ½	263	37 ½				
Atterbury 8E-5...	4	1	1	1	V	14	2	20 ½	2	40	2	F	17 ½	4	¼	4	17 ½	4	¼	4	91	67	156	34
Autocar XXI-F-1 ½...	4	1	1	1	V	5	1 ½	9 ½	1 ½	40 ½	2	F	16 ½	2 ½	¼	4	13 ½	2 ½	¼	4	114	90	204 ½	34
Autocar XXI-G-1 ½...	4	1	1	1	V	5	1 ½	9 ½	1 ½	40 ½	2	F	25 ½	2 ½	¼	4	25 ½	2 ½	¼	4	140	80 ½	223	34
Autocar XXVI-M4-6...	3	1	1	1	V	3 ½	1 ½	8 ½	1 ½	49 ½	2	F	25 ½	2 ½	¼	4	25 ½	2 ½	¼	4	176	116 ½	259	34
Autocar XXVII-H3...	3	1	1	1	V	3 ½	1 ½	8 ½	1 ½	47 ½	2	F	22 ½	2 ½	¼	4	22 ½	2 ½	¼	4	131 ½	76	213	34
Autocar XXVIII-K3...	3	1	1	1	V	3 ½	1 ½	8 ½	1 ½	47 ½	2	F	22 ½	2 ½	¼	4	22 ½	2 ½	¼	4	155 ½	100	201 ½	32
Available J-H-1 ½...	4	2	1	1	V	11	1 ½	14	1 ½	40	2	F	48	2 ½	¼	2	36	2 ½	¼	2	120	80 ½	212	32
Available J-H-2...	4	2	1	1	V	12	1 ½	14	1 ½	40	2	F	48	2 ½	¼	2	36	2 ½	¼	2	144	84 ½	226 ½	32
Available J-H-2 ½...	3	2	1	1	V	11	1 ½	14	1 ½	40	2	F	13 ½	3 ½	¼	4	16	3 ½	¼	4	168	106 ½	254 ½	36
Available J-H3 ½...	4	2	1	1	V	12	1 ½	14	1 ½	42	2	F	16	3 ½	¼	4	18	4	¼	4	168	112 ½	263 ½	38
Available J-H5...	3	2	1	1	V	12	2	16	2	40	2	F	18	4	¼	4	18	4	¼	4	124	82 ½	224	34
Bessemer G-1...	3	1	1	1	V	11 ½	2 ½	10	2 ½	42	½	V	46	2 ½	½	2	44	2 ½	½	2	98 ½	58 ½	182 ½	34
Bessemer H-2-1 ½...	3	1	1	1	V	11 ½	2 ½	10	2 ½	43	½	V	16 ½	2 ½	½	2	8	2	½	2	116	76	203	34
Bessemer J2-2 ½...	3	1	1	1	V	12	1 ½	5	1 ½	36 ½	1 ½	F	55	3 ½	½	2	18 ½	2 ½	½	2	142 ½	92 ½	229	34
Bessemer K2-4...	3	1	1	1	V	11 ½	2 ½	10	2 ½	39 ½	1 ½	F	20 ½	1 ½	½	2	33	4 ½	½	1	157 ½	108	249	38
Bethlehem KN-1...	3	1	1	1	V	8 ½	2 ½	8	2 ½	35	1 ½	F	51	2 ½	½	1	37	2 ½	½	1	116 ½	74	208 ½	34
Bethlehem GN-2...	3	1	1	1	V	8 ½	2 ½	9 ½	2 ½	40 ½	1 ½	F	61 ½	2 ½	½	1	47	2 ½	½	1	134 ½	81 ½	226 ½	34
Bethlehem HN-3...	3	1	1	1	V	12	1 ½	17	1 ½	33 ½	1 ½	F	11	3	½	4	11	3	½	4	126	90	215	34
Betz J3-1...	3	1	1	1	V	12	2	12	1 ½	33 ½	1 ½	F	12	3	½	4	12	2	½	4	Opt	Opt	Opt	34
Betz D-3 ½...	3	1	1	1	V	11	1 ½	13	1 ½	33	1 ½	F	13	3	½	4	13	2	½	4	118	118	33	33
Binton C-1 ½...	3	1	1	1	V	11	1 ½	13	1 ½	33	1 ½	F	13	3	½	4	13	2	½					

Replacement Table—Continued

NAME, MODEL AND TONNAGE	ENGINE						BRAKE LINING						FRAME												
	Piston Rings	Carburetor	Upper Hose	Lower Hose	Fan Belt		Service		Emergency		Length		Width		Length		Width		Length		Width				
	No. per Cyl.	Width	Outlet Diameter	Inlet Diameter	Vertical or Horizontal	Length	Width	Length	Width	Type	Length	Width	Thickness	No. of Pieces	Length	Width	Thickness	No. of Pieces	Back of Driver's Seat	Driver's Seat to Center of Rear Axle	Over All	Over All	Clearance at Lowest Point of Chassis		
Clinton 3.	4	1/4	1/4	*	H	11	2	19	1 1/4	38 3/8	2	F	13 1/2	3 1/2	1/4	4	13 1/2	3 1/2	1/4	4	166	102	270 1/2	33 1/4	9 1/2
Clinton 4.	4	1/4	1/4	*	H	11	2	19	1 1/4	38 3/8	2	F	15 1/2	3 1/2	1/4	4	15 1/2	3 1/2	1/4	4	163	105	270 1/2	33 1/4	8 1/2
Clinton 5.	4	1/4	1/4	*	H	12	2	18	1 1/4	41	2	F	18	4	1/4	4	18	4	1/4	4	206 1/2	115	318	33 1/4	8
Clinton 5-7.	4	1/4	1/4	*	H	2	2	18	1 1/4	41	2	F	18	4	1/4	4	18	4	1/4	4	130 1/2	91	242	33 1/4	10
Clydesdale 120B-5-6.	3	1/4	1/4	*	V V V	9	2	18	1 1/4	42	2	F	16	3 1/2	1/4	4	16	3 1/2	1/4	4	131	143	137	33 1/4	38
Clydesdale 90-3 1/2-4 1/2.	3	1/4	1/4	*	V V V	9	1 1/2	14	1 1/4	42	2	F	13 1/2	3 1/2	1/4	4	13 1/2	3 1/2	1/4	4	137	132	137	33 1/4	38
Clydesdale 65EX 2 1/2-3.	3	1/4	1/4	*	V V V	11	1 1/2	11	1 1/2	41	2	F	13 1/2	3 1/2	1/4	4	13 1/2	3 1/2	1/4	4	117	117	117	33 1/4	34
Clydesdale 65X-2 1/2-3.	3	1/4	1/4	*	V V V	11	1 1/2	11	1 1/2	41	2	F	12	3 1/2	1/4	4	11	3 1/2	1/4	4	95	95	95	33 1/4	34
Clydesdale 42 1/2-2.	3	1/4	1/4	*	V V V	15	2	12	2	41	2	F	11 1/2	2 1/2	1/4	4	11 1/2	2 1/2	1/4	4	109	109	109	33 1/4	34
Clydesdale 20-1-1 1/2.	3	1/4	1/4	*	V V V	15	2	12	2	41	2	F	11 1/2	2 1/2	1/4	4	11 1/2	2 1/2	1/4	4	117	117	117	33 1/4	34
Clydesdale 18-3 1/2-1 1/2.	3	1/4	1/4	*	V V V	9	2	9	2	41	2	F	11 1/2	2 1/2	1/4	4	11 1/2	2 1/2	1/4	4	109	109	109	33 1/4	34
Clydesdale 10-3 1/2-1 1/2.	3	1/4	1/4	*	V V V	9	2	9	2	41	2	F	11 1/2	2 1/2	1/4	4	11 1/2	2 1/2	1/4	4	109	109	109	33 1/4	34
Clydesdale 10A-1 1/2-1 1/2.	3	1/4	1/4	*	V V V	9	2	9	2	41	2	F	11 1/2	2 1/2	1/4	4	11 1/2	2 1/2	1/4	4	109	109	109	33 1/4	34
Columbi H-1 1/2.	3	1/4	1/4	*	V V V	10	1 1/2	12	1 1/4	39	1 1/4	F	23	1 1/4	1/4	4	23	1 1/4	1/4	4	117	117	117	32 1/2	34
Columbi G-2 1/2.	3	1/4	1/4	*	V V V	10	1 1/2	12	1 1/4	39	1 1/4	F	26	2	1/4	4	26	2	1/4	4	117	117	117	32 1/2	34
Columbia K-3.	3	1/4	1/4	*	V V V	11	1 1/2	12	1 1/4	42	2	F	26	2	1/4	4	26	2	1/4	4	117	117	117	32 1/2	34
Commerce 9-1500.	3	1/4	1/4	*	V V V	10	2	10	2	44	2	F	50	2	1/4	4	48 1/2	3 1/2	1/4	2	92 1/2	53 1/2	193	34	9
Commerce 14B-3000.	4	1/4	1/4	*	V V V	9 1/2	1 1/2	15	1 1/4	39	1 1/4	F	11 1/2	3 1/2	1/4	4	11 1/2	3 1/2	1/4	4	117	75	210	34	12 1/2
Commerce 25B-5000.	4	1/4	1/4	*	V V V	10	2	9	1 1/4	42	1 1/4	F	13	3 1/2	1/4	4	13	3 1/2	1/4	4	132	84	228 1/2	34	12 1/2
Concord E-1.	4	1/4	1/4	*	V V V	7	1 1/2	9 1/2	1 1/4	33	2	F	12	3 1/2	1/4	4	12	3 1/2	1/4	4	117	117	117	32 1/2	34
Concord G-2.	4	1/4	1/4	*	V V V	7	1 1/2	9 1/2	1 1/4	33	2	F	13 1/2	3 1/2	1/4	4	13 1/2	3 1/2	1/4	4	117	117	117	32 1/2	34
Concord H-2.	4	1/4	1/4	*	V V V	7	1 1/2	9 1/2	1 1/4	33	2	F	13 1/2	3 1/2	1/4	4	13 1/2	3 1/2	1/4	4	117	117	117	32 1/2	34
Concord J-2 1/2.	4	1/4	1/4	*	V V V	7	1 1/2	9 1/2	1 1/4	33	2	F	13 1/2	3 1/2	1/4	4	13 1/2	3 1/2	1/4	4	117	117	117	32 1/2	34
Corbit S-3 1/2.	3	1/4	1/4	*	V V V	8	2	14	2	38	1 1/4	F	16 1/2	1 1/4	1/4	4	16 1/2	1 1/4	1/4	4	103	59	196	68 1/2	11 1/2
Corbit E-1.	3	1/4	1/4	*	V V V	9	2	12	2	41	1 1/4	F	16 1/2	1 1/4	1/4	4	16 1/2	1 1/4	1/4	4	104	62	198	68 1/2	11 1/2
Corbit D-1 1/2.	3	1/4	1/4	*	V V V	11	1 1/2	12	1 1/4	42	1 1/4	F	16 1/2	1 1/4	1/4	4	16 1/2	1 1/4	1/4	4	110	72	206	68 1/2	10 1/2
Corbit C-2.	3	1/4	1/4	*	V V V	13	1 1/2	15	1 1/4	46	1 1/4	F	22 1/2	2 1/2	1/4	4	22 1/2	2 1/2	1/4	4	132	78	230	69	10 1/2
Corbit B-2 1/2.	3	1/4	1/4	*	V V V	13	1 1/2	15	1 1/4	46	1 1/4	F	22 1/2	2 1/2	1/4	4	22 1/2	2 1/2	1/4	4	136	78	232	69	10 1/2
Corbit R-2 1/2-3.	3	1/4	1/4	*	V V V	14	1 1/4	8	1 1/4	46	1 1/4	F	21	2	1/4	4	21	2	1/4	2	153	92	254	69	10 1/2
Corbit A-3 1/2-4.	3	1/4	1/4	*	V V V	13	2	14	2	36	2	F	68 1/2	3	1/4	4	68 1/2	3	1/4	2	168	106	266	86 1/2	9
Corbit AA-5.	3	1/4	1/4	*	V V V	13	2	14	2	36	2	F	68 1/2	3	1/4	4	68 1/2	3	1/4	2	168	106	268	86 1/2	10
Day-Elder AN-1 1/2.	3	1/4	1/4	*	V V V	6	1	7	1 1/4	34	1 1/4	F	10 1/2	3 1/2	1/4	4	10 1/2	3 1/2	1/4	4	106 1/2	62 1/2	191	35	.....
Day-Elder BN-2.	3	1/4	1/4	*	V V V	4	1	12	1 1/2	41	1 1/2	F	11 1/2	3 1/2	1/4	4	11 1/2	3 1/2	1/4	4	118 1/2	78	202 1/2	35	.....
Day-Elder DN-2 1/2.	3	1/4	1/4	*	V V V	4	1	12	1 1/2	43	1 1/2	F	13 1/2	3 1/2	1/4	4	13 1/2	3 1/2	1/4	4	122 1/2	72	212 1/2	35	.....
Day-Elder CN-3.	3	1/4	1/4	*	V V V	10 1/2	2	12	1 1/2	43	2	F	13 1/2	3 1/2	1/4	4	13 1/2	3 1/2	1/4	4	123 1/2	74	216	35	.....
Day-Elder FN-4.	3	1/4	1/4	*	V V V	7	1 1/2	12	1 1/2	43	2	F	15 1/2	3 1/2	1/4	4	15 1/2	3 1/2	1/4	4	120 1/2	81 1/2	214 1/2	35	.....
Day-Elder EN-5-6.	4	1/4	1/4	*	V V V	12 1/2	2	12	1 1/2	38	2	F	17 1/2	4	1/4	4	17 1/2	4	1/4	4	154	94	253	37	.....
Defiance G-2 1/2.	3	1/4	1/4	*	V V V	10	2	8	2	40	1 1/4	F	20	1 1/4	1/4	4	20	1 1/4	1/4	4	119 1/2	76	203	34	.....
Defiance GL-2 1/2.	3	1/4	1/4	*	V V V	10	2	8	2	40	1 1/4	F	45	2 1/2	1/4	4	45	2 1/2	1/4	4	119 1/2	76	203	34	.....
Defiance E-2 1/2.	3	1/4	1/4	*	V V V	10	2	8	2	40	1 1/4	F	52	2 1/2	1/4	4	52	2 1/2	1/4	4	119 1/2	76	203	34	.....
Defiance EL-2 2.	3	1/4	1/4	*	V V V	11 1/2	1 1/2	9	1 1/2	46	1 1/2	F	61	2 1/2	1/4	4	61	2 1/2	1/4	4	136 1/2	93 1/2	220	34	.....
Defiance H-2 2.	3	1/4	1/4	*	V V V	11 1/2	1 1/2	9	1 1/2	46	1 1/2	F	61	2 1/2	1/4	4	61	2 1/2	1/4	4	143 1/2	100 1/2	238	34	.....
Defiance HL-2 2.	3	1/4	1/4	*	V V V	11 1/2	1 1/2	9	1 1/2	46	1 1/2	F	61	2 1/2	1/4	4	61	2 1/2	1/4	4	101 1/2	66 1/2	190	34	.....
Dependable Dispatch A-1 1/2.	4	1/4	1/4	*	V V V	14	2	15	1 1/4	37	2	F	53 1/2	2 1/2	1/4	4	53 1/2	2 1/2	1/4	4	108	.....	33 1/2	34	.....
Dependable C-2.	4	1/4	1/4	*	V V V	14	2	15	1 1/4	37	2	F	53 1/2	2 1/2	1/4	4	53 1/2	2 1/2	1/4	4	121	77	215	33	9 1/2
Dependable D-2 1/2.	4	1/4	1/4	*	V V V	10	2	14	1 1/4	37															

Replacement Table—Continued

NAME, MODEL AND TONNAGE	ENGINE										BRAKE LINING						FRAME						
	No. per Cyl.	Piston Rings	Carburetor	Outlet Diameter	Inlet Diameter	Vertical or Horizontal	Upper Hose	Lower Hose	Fan Belt	Service			Emergency			Length		Width	Length		Width		
		Width					Length	Width	Length	Width	Type	Length	Width	No. of Pieces	Length	Width	No. of Pieces	Back of Driver's Seat	Driver's Seat to Center of Rear Axle	Over All	Over All	Clearance at Lowest Point of Chassis	
Gary F-1-1½	3	1	V	1	1	V	2	1	1	F	11½	3	1	4	11½	3	1	4	97½	...	34	11½	
Gary I-2	4	1½	V	1½	1	V	13½	2	2	F	12	3½	1	4	12	3½	1	4	120	72	214	34	10½
Gary J-2½	4	1½	V	1½	1	V	10	2	2	F	13½	3½	1	4	13½	3½	1	4	214	34	10½		
Gary K-3½	4	1½	V	1½	1	V	13	2	2	F	15½	3½	1	4	15½	3½	1	4	148	86	247	36½	10½
Gary M-5	4	1½	V	1½	1	V	14	2	2	F	18½	4	1	4	18½	4	1	4	168	99	275	39	10½
G.M.C. K-16	4	1½	V	1½	1	V	8½	1½	1½	R	49½	2½	1	4	47	2½	1	2	89	57	183½	34	8½
G.M.C. K-41	4	1½	V	1½	1	V	10	1½	1½	R	13	3½	1	2	13	3½	1	2	Opt	Opt	Opt	33	9½
G.M.C. K-71	4	1½	V	1½	1	V	11½	1½	1½	R	15½	3½	1	2	15½	3½	1	2	Opt	Opt	Opt	38	10½
G.M.C. K-101	4	1½	V	1½	1	V	9½	1½	1½	F	17½	4	1	4	4	11½	2	2	88½	56½	182½	32	11½
Gotfredson 20-1	4	1	V	1	1	V	9½	1½	1½	F	11½	3½	1	4	12	3½	1	4	120	69½	214½	32	12
Gotfredson 40-1½-2	4	1	V	1	1	V	11	2	2	F	12	3½	1	4	13½	3½	1	4	127	81½	222	33	9½
Gotfredson 50-2½	4	1	V	1	1	V	14	2	2	F	15½	3½	1	4	15½	3½	1	4	157	89½	247½	35	9½
Gotfredson 80-4	4	1	V	1	1	V	14	2	2	F	18	4	1	4	18	4	1	4	261½	38	9½		
Gotfredson 100-5	4	1	V	1	1	V	14	2	2	F	20	1½	1	4	20	1½	1	4	155½	89½	215½	38	10½
Graham Bros.	3	1½	V	1½	1	V	9	1½	1½	F	50	2½	1	2	26	2	1	2	98	58	194½	33½	36
Gramm-Pioneer 10 Speed-1	3	1	V	1½	1	V	12	2½	2½	F	48	2½	1	2	25	2	1	2	97	54	180	30½	
Gramm-Pioneer 15-1½-2	3	1	V	1½	1	V	10½	2	6	F	48½	1½	1	4	19½	1½	1	4	120	74	205½	32	
Gramm-Pioneer 65-1½-2	3	1	V	1½	1	V	4½	1½	1½	F	19½	1½	1	4	19½	1½	1	4	126	77½	214	32	
Gramm-Pioneer 125-2½	3	1	V	1½	1	V	11	1½	1½	F	8	2	1	4	24	2	1	4	129½	81½	226½	36	
Gramm-Pioneer 30-3	3	1	V	1½	1	V	11	1½	1½	F	22½	2½	1	4	22½	2½	1	4	129½	81½	226½	36	
Gramm-Pioneer 75P-3½	3	1	V	1½	1	V	11	1½	1½	F	22½	2½	1	4	22½	2½	1	4	144	87½	240½	36	
Gramm-Pioneer 40-4	3	1	V	1½	1	V	23½	2	13½	F	28	2	1	4	32½	2	1	4	132	97	263½	36	
Gramm-Pioneer 50-5-6	3	1	V	1½	1	V	12	2½	14½	F	32½	2	1	4	48	2½	1	2	98	70	192	31	
Grass Premier 40A	3	1	V	1½	1	V	14	2½	16	F	22½	2½	1	4	47	2½	1	2	120	214	31		
Grass Premier 60A1½	4	1	V	1½	1	V	12	2½	16	F	20½	2½	1	4	47	2½	1	2	95	83	192	35	
Grass Premier 70A2½	4	1	V	1½	1	V	14	2½	16	F	20½	2½	1	4	47	2½	1	2	108	214	31		
Grass Premier 90A3½	3	1	V	1½	1	V	11	1½	11	F	15½	3½	1	4	15½	3½	1	4	120	214	31		
Gray N-½	3	1	H	1	1	H	9	2½	2½	F	27½	1½	1	4	19½	1½	1	2	122½	35	9		
Gray T-1	3	1	H	1	1	H	9	2½	2½	F	20½	1½	1	4	20	1½	1	2	152½	32	9		
G. W. W. Super.	3	1	V	1½	1	V	8	1½	17½	F	49	2½	1	4	47	1½	1	2	89	72	192	32	11½
Harvey WOA-2	4	1	V	1½	2	V	11	2	14	F	45	2	1	2	45	2	1	2	139	87	242½	32	10
Harvey WFB-2½	4	1	V	1½	2	V	11	2	14	F	50	2½	1	2	50	2½	1	2	139	87	242½	32	10
Harvey WHB-3½	4	1	V	1½	2	V	12	2	14	F	20½	4	1	4	20½	3	1	4	151½	85½	258½	35	9
Harvey WFT-6	4	1	V	1½	2	V	12	2	14	F	50	4	1	4	50	3	1	2	84	52	189½	32	10
Harvey WHT-10	4	1	V	1½	2	V	12	2	14	F	20½	4	1	4	20½	3	1	2	86	52½	191½	35	9
Hawkeye O	4	1	V	1	1	V	12	2	9	F	1½	...	...	...	...	...	...	...	...	...	...
Hawkeye K	4	1	V	1	1	V	12	2	9	F	2	...	...	...	...	...	...	...	...	...	...
Hawkeye M	4	1	V	1	1	V	12	2½	9	F	2	...	...	...	...	...	...	...	...	...	...
Hawkeye N	4	1	V	1	1	V	14	2½	12	F	2	...	...	...	...	...	...	...	...	...	...
Hug T	4	1	V	1	1	V	12	1½	13	F	1½	...	...	...	...	...	...	...	...	...	...
Hurlburt A1½-2	3	1	V	1	1	V	12	1½	13	F	48	2½	1	2	22	2	1	2	132	...	35½		
Hurlburt B2½	3	1	V	1	1	V	12	2	10	F	22	2	1	2	23	2	1	2	154	...	34		
Hurlburt C3½-4	3	1	V	1	1	V	18	2	21½	F	24	2½	1	2	25	3	1	2	144½	...	34		
Hurlburt D5-½	3	1	V	1	1	V	8	1½	17½	F	26	3	1	2	27	3	1	2	144½	...	34		
Indiana 12-1½	3	1½	V	1½	1	V	17	1½	14	F	19	2	1	4	19	2	1	2	120	76	207½	32	10½
Indiana 20-2	3	1½	V	1½	1	V	6	1½	13	F	22½	2½	1	4	22½	2½	1	2	126	74½	217½	33	10½
Indiana 25-2½	3	1½	V	1½	1	V	6	1½	13	F	22½	2½	1	4	22½	2½	1	2	138	81	229½	33	9½
Indiana 35-3½	3	1½	V	1½	1	V	6	1½	13	F	20½	2	1	4	20½	2	1	2	144	84½	235½	34½	8½
Indiana 51-5	3	1½	V	1½	1	V	10	1½	17½	F	65½	3	1	4	65½	3	1	2	156½	91	253	37½	10½
Inter'l S-2000 lbs.-Sp. Tr.	3	1½	V	1½	1	V	9½	1½	17½	F	38	2	1	4	36	2	1	2	88	...	34		
International 21-2000 lbs.	3	1½	V	1½	1	V	6	1½	13	F	43½	2½	1	4	43½	2½	1	2	106½	...	34		
International 31-3000 lbs.	3	1½	V	1½	1	V	6	1½	13	F	50½	2½	1	4	50½	2½	1	2	111½	...	32½		
International 41-4000 lbs.	3	1½	V	1½	1	V	9	2½	14½	F	10½	2	1	4	10½	2	1	2	216	...	34		
International 52-Bus.	4	1	V	1½	1	V	9	2½	14½	F	50½	2	1	4	50½	2	1	2	118½	...	34		
International 61-6000 lbs.	4	1	V	1½	1	V	9	2½	14½	F	50½	2	1	4	50½	2	1	2	118½	...	34		
International 63-6000.	4	1	V	1½	1	V	9	2½	14½	F	73½	2½	1	4	73½	2½	1	2	118½	...	34		
International 101-10,000.	4	1	V	1½	1	V	9	2½	14½	F	20	2	1	4	20	2	1	2	147½	...	34		
International 102 TractorTr	4	1	V	1½	1	V	9	2½	14½	F	73½	2½	1	4	73½	2½	1	2	120	76	207½	32	10½
Jumbo 15-1½	4	1	V	1½	1	V	12½	1½	18	F	48½	2	1	2	47	2	1	2	120	73</td			

Replacement Table—Continued

NAME, MODEL AND TONNAGE	ENGINE						BRAKE LINING						FRAME									
	Piston Rings	Carburetor	Upper Hose	Lower Hose	Fan Belt		Service	Emergency		Length	Width	Thickness	No. of Pieces	Back of Driver's Seat	Length	Width						
	No. per Cyl.	Width	Outlet Diameter	Inlet Diameter	Vertical or Horizontal	Length	Width	Length	Width	Type	Length	Width	Thickness	No. of Pieces	Driver's Seat to Center of Rear Axle	Over All	Over All					
Krebs L-75.....	4	1/4	1 1/4	1 1/2	V	11	1 1/2	17	1 1/2	44	2	F	13 1/2	3 1/2	1/4	4	131	80	234	33 1/4	9	
Krebs L-110.....	4	1/4	1 1/4	1 1/2	V	11	1 1/2	17	1 1/2	44	2	F	16	3 3/4	1/4	4	131	87	234	38	10	
Krebs B-120.....	4	1/4	1 1/4	1 1/2	V	11	1 1/2	17	1 1/2	44	2	F	16	3 3/4	1/4	4	125 1/2	92 1/2	234	38	10	
Lange F 3 1/2.....	4	1/4	1 1/4	1 1/2	V	5	1 1/2	15 1/2	1 1/2	45	1 1/2	F	13 3/4	3 3/4	1/4	4	139	88	227 1/2	37	9 1/4	
Lange E 2 1/2.....	4	1/4	1 1/4	1 1/2	V	9	1 1/2	15 1/2	1 1/2	42	1 1/2	F	11 1/2	3 3/4	1/4	4	139	85	229	33	10	
Larrabee X2-1-1 1/4 Ton.....	3	1/4	1 1/4	1 1/2	V	6	1 1/4	14	1 1/4	34	1 1/4	F	19	2	1/4	2	108	59	205	34	11	
Larrabee J4-1 1/2-2 1/2 Ton.....	4	1/4	1 1/4	1 1/2	V	6	1 1/4	10	1 1/4	41	1 1/4	F	21	4	1/4	4	108	67 1/2	199	34	10 1/2	
Larrabee K5-2 1/2-3 1/2 Ton.....	4	1/4	1 1/4	1 1/2	V	6	1 1/2	11	1 1/2	45 1/2	1 1/2	F	21	4	1/4	4	Opt	Opt	Opt	34	10	
Larrabee L4-3 1/2-4 1/2 Ton.....	4	1/4	1 1/4	1 1/2	V	6	1 1/2	11	1 1/2	45 1/2	1 1/2	F	21	4	1/4	4	Opt	Opt	Opt	36	9	
Maccar EX.....	3	1/4	1 1/4	1 1/2	V	4 1/2	1 1/2	15	1 1/2	35 1/2	1 1/4	F	50	2	1/4	2	101 1/2	68	192 1/2	37	9 1/2	
Maccar L-1, 1 1/2.....	4	1/4	1 1/4	1 1/2	V	4	1 1/4	19	1 1/2	35	1 1/4	F	11 1/2	3 3/4	1/4	4	125 1/2	74 1/2	228 1/2	34	10 1/2	
Maccar H-1, 3.....	4	1/4	1 1/4	1 1/2	V	4	1 1/4	19	1 1/2	37 1/2	2	F	13 1/2	3 3/2	1/4	4	139 1/2	79 1/2	243 1/2	34	10	
Maccar M-2, 4.....	4	1/4	1 1/4	1 1/2	V	4	1 1/4	19	1 1/2	37 1/2	2	F	14 1/2	3 3/4	1/4	4	153 1/2	91 1/2	257 1/2	34	8 1/2	
Maccar G-1, 5.....	4	1/4	1 1/4	1 1/2	V	8	1 1/4	16 1/2	1 1/4	40 1/2	2	F	18	4	1/4	4	163 1/2	99 1/2	278	37 1/2	10	
Maccar HT.....	4	1/4	1 1/4	1 1/2	V	4	1 1/4	19	1 1/2	35	2	F	13 1/2	3 3/4	1/4	4	139 1/2	79 1/2	243 1/2	34	10	
Mack AB-1 1/2, 2, 2 1/2-T-Ch.....	3	1/4	1 1/4	1 1/2	V	7 1/2	1 1/4	5 1/2	1 1/4	36 1/2	1 1/4	F	18 1/2	3 3/2	1/4	2	Opt	Opt	Opt	33 1/2	....
Mack Dual R'd'n-1 1/2, 2, 2 1/2.....	3	1/4	1 1/4	1 1/2	V	7 1/2	1 1/4	5 1/2	1 1/4	36 1/2	1 1/4	F	11 1/2	2	1/4	2	77	33	33	32 1/2	....
Mack AB-Tractor-5.....	3	1/4	1 1/4	1 1/2	V	5	1 1/4	3 1/2	2	.....	.....	.....	16 1/2	3	1/4	4	Opt	Opt	Opt	37 1/2	....
Mack AC-3 1/2, 5, 6 1/2, 7 1/2.....	3	1/4	1 1/4	1 1/2	V	5	1 1/4	3 1/2	2	.....	.....	.....	20 1/2	3 1/2	1/4	4	87	34	34	34	....
Mason Road King.....	3	1/4	1 1/4	1 1/2	V	11 1/2	2	14 1/2	1 1/2	30 1/2	1	F	42 1/2	2 1/2	1/4	1	85	56 1/2	175	30	10	
Master 22-1 1/2.....	4	1/4	1 1/4	1 1/2	V	13 1/2	2	15	1 1/4	35	2	F	12	3 3/4	1/4	2	Opt	Opt	Opt	34 1/2	....
Master 41-2 1/2.....	4	1/4	1 1/4	1 1/2	V	13 1/2	2	15	1 1/4	35	2	F	13 1/2	3 3/2	1/4	2	117 1/2	34	34	34	....
Master 51-3 1/2.....	4	1/4	1 1/4	1 1/2	V	13 1/2	2	15	1 1/4	35	2	F	16	3 3/4	1/4	2	147 1/2	36	36	36	....
Master 61-5.....	4	1/4	1 1/4	1 1/2	V	13 1/2	2	15	1 1/4	35	2	F	13 1/2	3 3/2	1/4	2	162 1/2	36	36	36	....
Master 64-5 1/2.....	4	1/4	1 1/4	1 1/2	V	7 1/2	2 1/2	3 1/2	2 1/2	36 1/2	2 1/2	F	31	1 1/2	1/4	4	102 A	102 A	197	33	10 1/2	
Maxwell 1 1/2.....	3	1/4	1 1/4	1 1/2	V	6	1 1/2	12	1 1/2	40	1 1/4	F	11	2 1/2	1/4	4	102 A	102 A	224	32	10 1/2	
Menominee Hurryton-1.....	3	1/4	1 1/4	1 1/2	V	3	1 1/4	3	1 1/4	37 1/2	2	F	8	42 1/2	2 1/2	1/4	2	146	146	146	32	10 1/2
Menominee H-1 1/2.....	3	1/4	1 1/4	1 1/2	V	9 1/2	1 1/4	10 1/2	1 1/4	33 1/2	1 1/4	F	47 1/2	2 1/2	1/4	2	102 1/2	192	208	32	10 1/2	
Menominee D-2.....	3	1/4	1 1/4	1 1/2	V	2	3	3	1 1/4	40 1/2	2	F	69 1/2	2 1/2	1/4	2	149	149	246	36	9	
Menominee H-1 1/2.....	3	1/4	1 1/4	1 1/2	V	3	3	3	1 1/4	37 1/2	2	F	15 1/2	3 3/2	1/4	4	15 1/2	34	208 1/2	34	10 1/2	
Menominee J-3, 5.....	3	1/4	1 1/4	1 1/2	V	3	3	3	1 1/4	37 1/2	2	F	49	1 1/2	1/4	2	108	56 A	208 1/2	34	10 1/2	
Menominee G-3 1/2.....	3	1/4	1 1/4	1 1/2	V	8	1 1/2	11 1/2	1 1/2	34	1 1/2	F	12	3 3/4	1/4	2	108	56 A	208 1/2	34	10 1/2	
Moreland RR-1.....	3	1/4	1 1/4	1 1/2	V	12	1 1/2	18	1 1/2	42	1 1/2	F	13 1/2	3 3/2	1/4	4	123 1/2	80 A	220	34	9 1/2	
Moreland BX-1 1/2.....	3	1/4	1 1/4	1 1/2	V	10	1 1/2	17	1 1/2	40	1 1/2	F	16	3 3/4	1/4	4	142	91	243	36	8 1/2	
Moreland EX-2.....	3	1/4	1 1/4	1 1/2	V	9	1 1/2	13	1 1/2	42	1 1/2	F	13 1/2	3 3/2	1/4	4	174	101 A	253	34	10 1/2	
Moreland AX-3.....	3	1/4	1 1/4	1 1/2	V	9	1 1/2	13	1 1/2	42	1 1/2	F	12	3 3/4	1/4	2	132	79 1/2	226 1/2	34	10 1/2	
Moreland RX-5.....	4	1/4	1 1/4	1 1/2	V	8	1 1/2	14 1/2	1 1/2	42	2	F	49	1 1/2	1/4	2	192	115 1/2	271	38	10 1/2	
Moreland RC-Bus.....	3	1/4	1 1/4	1 1/2	H	9	1 1/2	13	1 1/2	42	1 1/2	F	13 1/2	3 1/2	1/4	2	156	100	256	34	7	
Moreland EC-Bus.....	3	1/4	1 1/4	1 1/2	H	9	1 1/2	13	1 1/2	42	1 1/2	F	15 1/2	3 3/4	1/4	2	152	102	254	34	8	
Moreland AC-Bus.....	3	1/4	1 1/4	1 1/2	H	9	1 1/2	13	1 1/2	42	1 1/2	F	13 1/2	3 3/4	1/4	2	171	114 1/2	271	44	7	
Nash 2018-1-1 1/2.....	4	1/4	1 1/4	1 1/2	...	3	1 1/4	7 1/4	1 1/4	36	1	F	49 1/2	2	1/4	2	20 A	20 A	207	31 1/2	9 1/2	
Nash 3018-2-2 1/2.....	4	1/4	1 1/4	1 1/2	...	3	1 1/4	7 1/4	1 1/4	36	1	F	50 1/2	3	1/4	2	118 1/2	65	207	31 1/2	9 1/2	
Nash 4017-2 1/2.....	3	1/4	1 1/4	1 1/2	...	7	1 1/4	11	1 1/4	44	1 1/4	F	49 1/2	2	1/4	2	117 1/2	85 1/2	202 1/2	38	14 1/2	
National FA-1.....	3	1/4	1 1/4	1 1/2	V	17	1 1/4	11	1 1/4	44	1 1/4	F	11	3	1/4	4	97 1/2	58 1/2	194	34	10 1/2	
National GA-1 1/2.....	3	1/4	1 1/4	1 1/2	V	17	1 1/4	11	1 1/4	44	1 1/4	F	12	3 3/4	1/4	4	111 1/2	63 1/2	208	34	9 1/2	
National HD-2 1/2.....	3	1/4	1 1/4	1 1/2	V	12	1 1/2	18	1 1/2	42	1 1/2	F	13 1/2	3 3/2	1/4	4	123 1/2	80 A	220	34	9 1/2	
National NB-3 1/2.....	3	1/4	1 1/4	1 1/2	V	10	1 1/2	17	1 1/2	40	1 1/2	F	16	3 3/4	1/4	4	142	91	243	38	10 1/2	
National OA-5.....	3	1/4	1 1/4	1 1/2	V	12	1 1/2	18	1 1/2	46	1 1/2	F	17 1/2	4	1/4	4	137 1/2	91 1/2	238	38	10 1/2	
Nelson & LeMoon G-1.....	4	1/4	1 1/4	1 1/2	V	8	1 1/2	3 1/2	1 1/2	39 1/2	1 1/2	F	11 1/2	2 1/2	1/4	2	65	65	111 1/2	34	11 1/2	
Nelson & LeMoon G-1 1/2.....	4	1/4	1 1/4	1 1/2	V	9	1 1/2	3 1/2	1 1/2	39 1/2	1 1/2	F	11 1/2	2 1/2	1/4	2	Opt	Opt	Opt	34	11 1/2	
Nelson & LeMoon G-2.....	4	1/4	1 1/4	1 1/2	V	9	1 1/2	3 1/2	1 1/2	41 1/2	1 1/2	F	12	3 3/4	1/4	2	Opt	Opt	Opt	34	11 1/2	
Nelson & LeMoon G-3.....	4	1/4	1 1/4	1 1/2	V	9</																

Replacement Table—Continued

Width at Lowest Point of Chassis	ENGINE										BRAKE LINING						FRAME											
	NAME, MODEL AND TONNAGE		Piston Rings	Carburetor	Upper Hose	Lower Hose	Fan Belt	Service			Emergency			Length		Width		Length		Width								
	No. per Cyl.	Width	Outlet Diameter	Inlet Diameter	★ Vertical or Horizontal	Length	Width	Length	Width	Type	Length	Width	Thickness	No. of Pieces	Length	Width	Thickness	No. of Pieces	Back of Driver's Seat	Driver's Seat to Center of Rear Axle	Over All	Width at Lowest Point of Chassis						
9	Patriot Washington Spl.-3..	3	1 1/4	1 1/2	%	V	11	1 1/2	10	2	39	2	1/8	F	58	2 3/4	1/4	1	43	2 1/2	1/4	1	150	82	246	34	10	
10	Penn 1.	4	1 1/2	1 1/2	1 1/2	H	12	2 1/2	7 1/2	2 1/2	33 1/4	40	1 1/2	F	40	1 1/2	1/2	4	40	1 1/2	1/2	4	89	52	178	34	9 1/2	
10	Penn 2.	3	1 1/2	1 1/2	1 1/2	V	8	2 1/2	6	2	43 1/4	5	1/8	V	10	2 1/2	1/4	1	4	46 1/4	2	1/4	1	124	80	214	38	12
Perfection A.	3	1 1/2	1 1/2	1 1/2	V	9	2	6	2	43 1/4	10	10	10	F	10	2 1/2	1/4	4	10	10	10	4	95 1/4	67 1/4	175	32	10 1/2	
Perfection B.	3	1 1/2	1 1/2	1 1/2	V	9	2	6	2	43 1/4	10	10	10	F	10	2 1/2	1/4	4	10	10	10	4	104 1/4	76 1/4	184	32	10 1/2	
Perfection C.	4	1 1/2	1 1/2	1 1/2	V	9 1/2	2	14	1 1/2	41 1/2	10	10	10	F	10	2 1/2	1/4	4	10	2	1/4	4	117 1/2	78 1/2	217	34	10 1/2	
Perfection D.	4	1 1/2	1 1/2	1 1/2	V	9 1/2	2	14	1 1/2	41 1/2	10	10	10	F	10	2 1/2	1/4	4	10	2	1/4	4	103 1/2	64 1/2	203	34	9 1/2	
Perfection E.	4	1 1/2	1 1/2	1 1/2	V	12	2	6	2	40 3/4	12	3 1/2	1/4	F	12	3 1/2	1/4	4	12	2 1/4	1/4	4	146 1/2	110 1/2	235	38	12 1/2	
Perfection EA.	4	1 1/2	1 1/2	1 1/2	V	12	2	6	2	40 3/4	12	3 1/2	1/4	F	12	3 1/2	1/4	4	12	2 1/4	1/4	4	125 1/2	70 1/2	225	34 1/2	8 1/2	
Pierce Arrow XA-2..	3	1 1/2	1 1/2	1 1/2	V	16 1/2	2 1/2	14 1/2	2 1/2	43 1/2	22	2 1/2	1/4	F	22	2 1/2	1/4	4	22	2 1/2	1/4	4	133 1/2	78 1/2	237	38 1/2	7 1/2	
Pierce Arrow XB-3..	3	1 1/2	1 1/2	1 1/2	V	16 1/2	2 1/2	14 1/2	2 1/2	43 1/2	9	6	6	F	9	6	6	4	18	4 1/2	1/4	4	133 1/2	78 1/2	237	38 1/2	7 1/2	
Pierce Arrow WC-4..	3	1 1/2	1 1/2	1 1/2	V	11	2 1/2	15 1/2	2 1/2	43 1/2	12	3 1/2	1/4	F	12	3 1/2	1/4	4	12	2 1/4	1/4	4	133 1/2	78 1/2	237	38 1/2	7 1/2	
Pierce Arrow WD-5..	3	1 1/2	1 1/2	1 1/2	V	11	2 1/2	15 1/2	2 1/2	43 1/2	12	3 1/2	1/4	F	12	3 1/2	1/4	4	12	2 1/4	1/4	4	133 1/2	78 1/2	237	38 1/2	7 1/2	
Pierce Arrow RE-6..	3	1 1/2	1 1/2	1 1/2	V	11	2 1/2	15 1/2	2 1/2	43 1/2	12	3 1/2	1/4	F	12	3 1/2	1/4	4	12	2 1/4	1/4	4	133 1/2	78 1/2	237	38 1/2	7 1/2	
Pierce Arrow RF-7 1/2..	3	1 1/2	1 1/2	1 1/2	V	16 1/2	2 1/2	14 1/2	2 1/2	43 1/2	22	2 1/2	1/4	F	22	2 1/2	1/4	4	22	2 1/2	1/4	4	139 1/2	84 1/2	243	38 1/2	8 1/2	
Pierce Arrow XB-TT..	3	1 1/2	1 1/2	1 1/2	V	16 1/2	2 1/2	14 1/2	2 1/2	43 1/2	13	2 1/2	1/4	F	13	2 1/2	1/4	4	20	2 1/2	1/4	4	125 1/2	70 1/2	225	34 1/2	8 1/2	
Pierce Arrow WD-TT..	3	1 1/2	1 1/2	1 1/2	V	11	2 1/2	15 1/2	2 1/2	43 1/2	9	6	6	F	9	6	6	4	18	4 1/2	1/4	4	133 1/2	78 1/2	237	38 1/2	7 1/2	
Pioneer 59AA-1..	3	1 1/2	1 1/2	1 1/2	V	13	2	12	2	35	1	1/4	F	14	1 1/4	1/4	4	14	1 1/4	1/4	4	102	126	74	210	.....	
Pittsburgh A 1 1/2-2..	3	1 1/2	1 1/2	1 1/2	V	6	1 1/2	12	1 1/2	37	1	1/4	F	24	2	1/4	4	24	2	1/4	4	126	126	74	210	.....	
Pittsburgh C 2 1/2-3..	3	1 1/2	1 1/2	1 1/2	V	6	2 1/2	16	1 1/2	43	26	2	1/4	F	26	2	1/4	4	26	2	1/4	4	136	84	220	.....	.....
Pittsburgh D 3 1/2-4..	3	1 1/2	1 1/2	1 1/2	V	8	1 1/4	10	1 1/4	36	11	3 1/4	1/4	F	11	3 1/4	1/4	4	136	84	220	.....	.....			
Power 1 1/2..	3	1 1/2	1 1/2	1 1/2	V	12	1 1/2	12 1/2	1 1/2	43	26 1/2	2	1/4	F	26 1/2	2	1/4	4	143	.....	.....	.....	32	10 1/2			
Power F-2 1/2..	3	1 1/2	1 1/2	1 1/2	V	9	1 1/2	12	1 1/2	36	59	2	1/4	F	45	2	1/4	4	1	1 1/2	1/4	4	36	12	.....	.....	12
Rainier R31-3/4..	3	1 1/2	1 1/2	1 1/2	V	9	2	6	2	43 1/4	11	2 1/2	1/4	V	11	2 1/2	1/4	4	11	2 1/2	1/4	4	86 1/2	50 1/2	181	34	11 1/2	
Rainier R29-1..	3	1 1/2	1 1/2	1 1/2	V	8	2	6	2	43 1/4	11	2 1/2	1/4	V	11	2 1/2	1/4	4	11	2 1/2	1/4	4	96 1/2	57 1/2	190 1/2	34	10 1/2	
Rainier R36-1 1/2..	4	1 1/2	1 1/2	1 1/2	V	8	1 1/2	14	1 1/2	40	12	3 1/2	1/4	F	12	3 1/2	1/4	4	11	3 1/2	1/4	4	111	72 1/2	206 1/2	34	9 1/2	
Rainier R28-2 1/2-3..	4	1 1/2	1 1/2	1 1/2	V	9 1/2	1 1/2	14	1 1/2	42	12	3 1/2	1/4	F	12	3 1/2	1/4	4	12	3 1/2	1/4	4	124 1/2	80 1/2	225	33	9 1/2	
Rainier R20-2 1/2-3..	4	1 1/2	1 1/2	1 1/2	V	9 1/2	1 1/2	14	1 1/2	42	12	3 1/2	1/4	F	12	3 1/2	1/4	4	13	3 1/2	1/4	4	137 1/2	85 1/2	241 1/2	33	10	
Rainier R25-3 1/2-5..	4	1 1/2	1 1/2	1 1/2	V	9 1/2	1 1/2	14	1 1/2	42	12	3 1/2	1/4	F	12	3 1/2	1/4	4	14	15 1/2	1/2	4	157 1/2	91	263 1/2	37	8 1/2	
Rainier R27-6 1/2..	4	1 1/2	1 1/2	1 1/2	V	9 1/2	1 1/2	14	1 1/2	42	12	3 1/2	1/4	F	12	3 1/2	1/4	4	15	15 1/2	1/2	4	154 1/2	88	263 1/2	37	9 1/2	
Reo F-2500 lbs..	3	1 1/2	1 1/2	1 1/2	V	5 1/2	1	5 1/2	1	39 1/2	12	3 1/2	1/4	F	45 1/2	3	1/4	1	40 1/2	3	1/4	1	81 1/2	55 1/2	171	30	10 1/2	
Rowe CDW-2..	3	1 1/2	1 1/2	1 1/2	V	10 1/2	1 1/2	10	1 1/2	32 1/2	12	3 1/2	1/4	F	45 1/2	3	1/4	1	40 1/2	3	1/4	1	72	24	202 1/2	33	10 1/2	
Rowe CDW-2 1/2..	4	1 1/2	1 1/2	1 1/2	V	20	1 1/2	15	1 1/2	32 1/2	12	3 1/2	1/4	F	45 1/2	3	1/4	1	44	24	2 1/2	1/4	4	123	103 1/2	224	33	9 1/2
Rowe GSW-3..	3	1 1/2	1 1/2	1 1/2	V	20	1 1/2	15	1 1/2	36 1/2	24	5 1/2	1/4	F	56 1/2	2	1/4	2	44	24	2 1/2	1/4	4	140	96 1/2	230	33	9 1/2
Rowe HW-4..	3	1 1/2	1 1/2	1 1/2	V	20	1 1/2	15	1 1/2	36 1/2	24	5 1/2	1/4	F	68	3	1/4	2	44	24	2 1/2	1/4	4	146	96	230 1/2	36	9 1/2
Rowe FW-5..	3	1 1/2	1 1/2	1 1/2	V	20	1 1/2	15	1 1/2	36 1/2	24	5 1/2	1/4	F	68	3	1/4	2	44	24	2 1/2	1/4	4	153	95 1/2	170	38 1/2	9 1/2
Ruggles 15-3/4..	3	1 1/2	1 1/2	1 1/2	V	12 1/2	2	20	1 1/2	34 1/2	12	3 1/2	1/4	F	43 1/2	2	1/4	2	44	24	2 1/2	1/4	4	96 1/2	55 1/2	186 1/2	34	11
Ruggles 20R-1 1/4..	3	1 1/2	1 1/2	1 1/2	V	7 1/2	2	13 1/2	1 1/2	35	12	3 1/2	1/4	F	48	2	1/4	2	44	24	2 1/2	1/4	4	104 1/2	65	194 1/2	34	11
Ruggles 20AR-1 1/4..	3	1 1/2	1 1/2	1 1/2	V	7 1/2	2	13 1/2	1 1/2	35	12	3 1/2	1/4	F	48	2	1/4	2	44	24	2 1/2	1/4	4	134 1/2	75 1/2	224	34	8 1/2
Ruggles 40-2..	3	1 1/2	1 1/2	1 1/2	V	8 1/2	2	13 1/2	1 1/2	35	12	3 1/2	1/4	F	58	2	1/4	2	44	24	2 1/2							

Replacement Table—Continued

NAME, MODEL AND TONNAGE	ENGINE								BRAKE LINING						FRAME													
	Piston Rings		Carburetor		Upper Hose	Lower Hose	Fan Belt		Service		Emergency		Length		Width		Length		Width		Over All		Over All					
	No. per Cyl.	Width	Outlet Diameter	Inlet Diameter	Vertical or Horizontal	Length	Width	Length	Width	Type	Length	Width	Thickness	No. of Pieces	Length	Width	Thickness	No. of Pieces	Back of Driver's Seat	Driver's Seat to Center of Rear Axle	Over All	Over All	Over All	Clearance at Lowest Point of Chassis				
Stoughton B-1½.....	3	1	1	1	V	18	1	15	1	F	39 1/2	1 1/2	1/8	4	19	2	1/8	4	116	66	210	34	11	9 1/2				
Stoughton D-2.....	3	1	1	1	V	10	1	15	1	F	44	2	1/8	4	23	2	1/8	4	116	70	222	34	9 1/2	9 1/2				
Stoughton F-3.....	3	1	1	1	V	18 1/2	1	19	1	F	44	2	1/8	4	23	2	1/8	4	127	82	243	36	9 1/2	9 1/2				
Super Truck 50.....	3	1	1	1	V	18 1/2	1	19	1	F	37 1/2	1 1/2	1/8	2	51 1/2	2	1/8	4	135	84	249	34	10 1/2	10 1/2				
Super Truck 70.....	3	1	1	1	V	6	1	19	1	F	42	1 1/8	1/8	2	55 1/2	2	1/8	4	144	97 1/2	249	34	10	10				
Super Truck 100.....	3	1	1	1	V	1 1/2	1	19	1	F	68	3	1/4	2	51 1/2	3	1/4	2	144	97 1/2	249	34	10	10				
Traffic C-4000.....	3	1	1	1	H	10 1/2	2	10 1/2	2	F	41 1/2	1 1/2	1/8	2	43 1/2	2 1/2	1/8	2	120	67 1/2	213 1/2	42	10 1/2	10 1/2				
Traffic 6000.....	3	1	1	1	H	10 1/2	2	10 1/2	2	F	52	3	1/8	2	47	2	1/8	2	120	69 1/2	213 1/2	34	11 1/2	11 1/2				
Traffic Speedboy.....	3	1	1	1	H	10 1/2	2	10 1/2	2	F	43 1/2	2 1/2	1/8	2	38	1 3/4	1/8	2	86	55 1/2	174	34	11 1/2	11 1/2				
Transport 15-1.....	3	1	1	1	H	10 1/2	2	13	2	F	40 1/2	1 1/2	1/8	2	48	2 1/2	1/8	2	98 1/2	57 1/2	188	34	10	10				
Transport 26-1½.....	4	1	1	1	H	9 1/2	2	13	1	F	34 1/2	1 1/2	1/8	2	48 1/2	2	1/8	2	113 1/2	70 1/2	201	34	10	10				
Transport 36-2.....	4	1	1	1	H	10 1/2	2	16	1	F	33 1/2	2	1/8	2	10 1/2	3 1/2	1/8	2	120	72 1/2	210	34	11	11				
Transport 61-3½.....	4	1	1	1	H	9 1/2	2	16	1	F	33 1/2	2	1/8	2	11 1/2	3 1/2	1/8	2	127 1/2	78 1/2	218	34	11	11				
Transport 75-5.....	4	1	1	1	H	12	2	14	1	F	35 1/2	1 1/2	1/8	2	11 1/2	3 1/2	1/8	2	150 1/2	93 1/2	251 1/2	36 1/2	10 1/2	10 1/2				
Traylor B.....	4	1	1	1	V	10	2	6	1	F	50	2	1/8	2	50	2	1/8	2	117	75	204 1/2	34	10	10				
Traylor C.....	4	1	1	1	V	12	2	12	1	F	50	2	1/8	2	50	2	1/8	2	122	73 1/2	218 1/2	34	10 1/2	10 1/2				
Traylor D.....	4	1	1	1	V	12	2	12	1	F	56 1/2	2 1/2	1/8	2	56 1/2	2 1/2	1/8	2	142	76	241 1/2	34	9 1/2	9 1/2				
Traylor F.....	4	1	1	1	V	14	2	14	1	F	37	2	1/8	2	59	2 1/2	1/8	2	165	92 1/2	273 1/2	35	11	11				
Triangle AA-1.....	3	1	1	1	H	17	2	17	2	F	34	1	1/8	2	48	3	1/8	2	94	53	177	35	10	10				
Triangle A-1½.....	4	1	1	1	V	14	1	18	1	F	39 1/2	1 1/2	1/8	2	71 1/2	4	1/8	2	126	77 1/2	225	34	12	12				
Triangle B 2½.....	3	1	1	1	V	9	1	18	1	F	39 1/2	1 1/2	1/8	2	71 1/2	4	1/8	2	132	84 1/2	217 1/2	34	9	9				
Triangle C-2.....	4	1	1	1	V	14	1	18	1	F	39 1/2	1 1/2	1/8	2	52	3	1/8	2	129	81	219 1/2	34	12	12				
Ultimate A-2.....	4	1	1	1	V	11	2	8	1	F	34	2	1/8	2	17	1 3/4	1/8	2	126	.....	.....	32 1/2	32 1/2	32 1/2		
Ultimate AJ2.....	4	1	1	1	V	11	2	8	1	F	34	2	1/8	2	17	1 3/4	1/8	2	126	.....	.....	32 1/2	32 1/2	32 1/2		
Ultimate AJL-2.....	4	1	1	1	V	11	2	8	1	F	34	2	1/8	2	17	1 3/4	1/8	2	150	.....	.....	32 1/2	32 1/2	32 1/2		
Ultimate AJXL.....	4	1	1	1	V	11	2	8	1	F	34	2	1/8	2	17	1 3/4	1/8	2	150	.....	.....	32 1/2	32 1/2	32 1/2		
Ultimate B-3.....	4	1	1	1	V	11	2	8	1	F	34	2	1/8	2	17	1 3/4	1/8	2	144	.....	.....	32 1/2	32 1/2	32 1/2		
Ultimate BL3.....	4	1	1	1	V	11	2	8	1	F	34	2	1/8	2	17	1 3/4	1/8	2	192	.....	.....	32 1/2	32 1/2	32 1/2		
Ultimate D-5.....	4	1	1	1	V	11	2	8	1	F	34	2	1/8	2	17	1 3/4	1/8	2	180	.....	.....	32 1/2	32 1/2	32 1/2		
Union FW-2½.....	3	1	1	1	V	20	1	19 1/2	1	F	37 1/2	2	1/8	2	26	4 1/2	1/8	2	1	52	3	1/4	1	133 1/2	77 1/2	224	32	11 1/2
Union H-4.....	3	1	1	1	V	20	1	19 1/2	1	F	37 1/2	2	1/8	2	26	4 1/2	1/8	2	1	52	3	1/4	1	133 1/2	77 1/2	224	32	11 1/2
Union HW-4.....	3	1	1	1	V	20	1	19 1/2	1	F	37 1/2	2	1/8	2	26	4 1/2	1/8	2	1	52	3	1/4	1	133 1/2	77 1/2	224	32	11 1/2
United Highway Spec.....	3	1	1	1	V	14	2	10	1	F	34	2	1/8	2	48	2 1/2	1/8	2	1	24	4	1/4	1	157 1/2	98	264	34	13 1/2
United 30.....	3	1	1	1	V	14	2	10	1	F	34	2	1/8	2	48	2 1/2	1/8	2	1	53	3	1/4	1	92	53 1/2	182	33	9 1/2
United 35.....	3	1	1	1	V	10	2	12	1	F	32 1/2	2	1/8	2	48	2 1/2	1/8	2	1	33 1/2	75 1/2	206	33	9	9			
United 50.....	3	1	1	1	V	10	2	12	1	F	32 1/2	2	1/8	2	47 1/2	2 1/2	1/8	2	1	33 1/2	76 1/2	206	33	9 1/2				
United 80.....	4	1	1	1	V	10	2	12	1	F	32 1/2	2	1/8	2	57 1/2	2 1/2	1/8	2	1	32 1/2	80 1/2	226	33	8 1/2				
U.S.U.-1½.....	4	1	1	1	V	11 1/2	1	11 1/2	1	F	33	1	1/8	2	50 1/2	2 1/2	1/8	2	1	41 1/2	81 1/2	237 1/2	34	9 1/2				
U.S.N.-1½.....	3	1	1	1	V	10 1/2	1	11 1/2	1	F	37	1	1/8	2	50 1/2	2 1/2	1/8	2	1	46 1/2	1 1/2	108	70	195	32	9 1/2		
U.S.N.W.-23-1½-2.....	4	1	1	1	V	10	1	10	1	F	35	1	1/8	2	21	2 1/2	1/8	2	1	52	3	1/4	1	120	82	211	34	11
U.S.R.-2½-3.....	3	1	1	1	V	9	1	8	1	F	37	2	1/8	2	21	2 1/2	1/8	2	1	44	94	241	34	9 1/2				
U.S.S.-3½-4.....	3	1	1	1	V	15	2	13	1	F	38 1/2	2	1/8	2	62	3	1/8	2	1	56	4	1	1	156	104	258	36	9
U.S.T. 5-7.....	4	1	1	1	V	9	1	8	1	F	37	1	1/8	2	21	4	1/8	2	1	68	103	278	36	10 1/2				
U.S.S.Spec. 4-5.....	3	1	1	1	V	8	1	8	1	F	40 1/2	2	1/8	2	52	2 1/2	1/8	2	1	56	4	1	1	156	36
Velie 52-1½.....	4	1	1	1	V	5 1/2	1	5 1/2	1	F	40 1/2	2	1/8	2	54 1/2	2 1/2	1/8	2	2	52 1/2	2 1/2	1/8	2	120	70	222	31	10
Wachusett S-1.....	3	1	1	1	V	9 1/2	1	11	1	F	31 1/2	1 1/2	1/8	2	11 1/2	2 1/2	1/8	2	2	115	74	212	33	11				
Wachusett J-1½.....	4	1	1	1	V	10	1	12	1	F	36	1	1/8	2	11	3	1/8	2	121	76	212	33	11					
Wachusett K2.....	4	1	1	1	V	11	1	11	1	F	40 1/2	1 1/2	1/8	2	11 1/2	3 1/2	1/8	2	145	78	240	33	11					
Walker 15.....	4	1	1	1	V	10	1	11	1	F	41 1/2	1 1/2	1/8</td															

KEY OF ABBREVIATIONS

Engine:

Buda—Buda Co., Harvey, Ill.
 Cont—Continental Motors Corp., Detroit, Mich.
 GES—Golden, Belknap & Swartz Co., Detroit, Mich.
 Her—Hercules Motor Mfg. Co., Canton, Ohio.
 Hin—Hinkley Motors, Inc., Detroit, Mich.
 H-Sp.—Herschell-Spillman Motor Co., North Tonawanda, N. Y.
 HS—Holl Scott Motor Co., Berkeley, Cal.
 Lyco—Lycoming Motors Corp., Williamsport, Pa.
 Mid—Midwest Engine Co., Indianapolis, Ind.
 Wau—Waukesha Motor Co., Waukesha, Wis.
 Wis—Wisconsin Motor Mfg. Co., Milwaukee, Wis.

Radiator:

Bre—Bremer-Tully Mfg. Co., Chicago, Ill.
 Bus—Bush Mfg. Co., Hartford, Conn.
 Cor—Corcoran Mfg. Co., Cincinnati, Ohio.
 Chic—Chicago Mfg. Co., Chicago, Ill.
 EM—English & Mersick Co., New Haven, Conn.
 Fed—Feeders Mfg. Co., Buffalo, N. Y.
 Flex—Flexo Mfg. Co., Los Angeles, Cal.
 GO—G. & O. Mfg. Co., New Haven, Conn.
 Har—Harrison Radiator Corp., Lockport, N. Y.
 Idl—Ideal Sheet Metal Works, Chicago, Ill.
 Lng—Long Mfg. Co., Detroit, Mich.
 McC—McCord Radiator & Mfg. Co., Detroit, Mich.
 McK—McKinnon Dash Co., Buffalo, N. Y.
 Mod—Modine Mfg. Co., Racine, Wis.
 Per—Racine Radiator Co., Racine, Wis.
 R-T—Rome Turney Radiator Co., Rome, N. Y.
 SJ—Shotwell Johnson Co., Minneapolis, Minn.
 Spri—Splitdorf Electrical Co., Newark, N. J.
 Stn—Standard Radiator Co., Inc., Springfield, N. Y.
 US—U. S. Cartridge Co., Lowell, Mass.
 Whe—Wheeler Radiator & Mfg. Co., E. Cleveland, Ohio.

Carburetor:

Cart—Carter Carburetor Co., St. Louis, Mo.
 Ens—Ensign Carburetor Co., Los Angeles, Cal.
 Hol—Holley Carburetor Co., Detroit, Mich.
 John—Johnson Co., Detroit, Mich.
 Mar—Marvel Carburetor Co., Flint, Mich.
 Rayf—Beneke & Kropf Mfg. Co., Chicago, Ill.
 Scoe—Briscoe Devices Corp., Pontiac, Mich.
 Strm—Stromberg Motor Devices Co., Chicago, Ill.
 Sheb—Wheeler Schebler Carburetor Co., Indianapolis, Ind.
 Stew—Detroit Lubricator Co., Detroit, Mich.
 Till—Tillotson Mfg. Co., Toledo, Ohio.
 Zen—Zenith-Detroit Corp., Detroit, Mich.

Governor:

Con—Continental Motors Corp., Detroit, Mich.
 Dup—Duplex Engine Governor Co., Brooklyn, N. Y.
 Han—Handy Governor Co., Detroit, Mich.
 Hin—Hinkley Motors, Inc., Detroit, Mich.
 McC—E. R. Klemm, Chicago, Ill.
 Mon—Monarch Governor Co., Detroit, Mich.
 Phar—Pharo Mfg. Co., Detroit, Mich.
 Pier—Pierce Governor Co., Anderson, Ind.
 Sim—Duplex Engine Governor Co., Brooklyn, N. Y.
 Wau—Waukesha Motor Co., Waukesha, Wis.

Ignition System:

AC—Allis Chalmers Mfg. Co., Milwaukee, Wis.
 Apo—Apollo Magneto Corp., Apollo, Pa.
 ATK—Atwater Kent Mfg. Co., Phila., Pa.
 AuL—Electric Auto-Lite Corp., Toledo, O.
 Ber—Ericsson Mfg. Co., Buffalo, N. Y.
 Bj—Bijur Motor Appliance Co., Hoboken, N. J.
 Bos—American Bosch Magneto Co., Springfield, Mass.
 Con—Connecticut Telephone & Electric Co., Meriden, Conn.
 Del—Dayton Engineering Laboratories Co., Dayton, Ohio.
 Dy—Owen Dyneto Corp., Syracuse, N. Y.
 Eis—Elsemann Magneto Corp., Brooklyn, GD—Gray & Davis, Boston, Mass.
 Kin—Kokomo Electric Co., Kokomo, Ind.
 KW—K W Ignition Co., Cleveland, Ohio.
 LN—Leece-Neville Co., Cleveland, O.
 NE—North East Electric Co., Rochester, N. Y.
 POL—Prest-O-Lite Co., Inc., Indianapolis, Ind.
 Rm—Remy Electric Co., Anderson, Ind.
 RBo—Robert Bosch Magneto Co., New York, N. Y.
 Sim—Simms Magneto Co., East Orange, N. J.
 Spl—Splitdorf Electrical Co., Newark, N. J.

Wag—Wagner Electric Mfg. Co., St. Louis, Mo.

Wes—Westinghouse Elec. & Mfg. Co., Springfield, Mass.
 USL—U. S. Light & Heat Corp., Niagara Falls, N. Y.

Clutch & Gearset:

B.B.—Borg & Beck Co., Chicago, Ill.
 B-Li—Brown-Lipe Gear Co., Syracuse, N. Y.
 Cott—Cotta Gear Co., Rockford, Ill.
 Covt—Covert Gear Co., Lockport, N. Y.
 Det—A. J. Dettaff Co., Detroit, Mich.
 DG—Detroit Gear & Machine Co., Detroit, Mich.
 Dod—Dodge Brothers Co., Detroit, Mich.
 Dun—Dundore Mfg. Co., Reading, Pa.
 Durs—Durston Gear Corp., Syracuse, N. Y.
 Full—Fuller & Sons Mfg. Co., Kalamazoo, Mich.
 G-Le—Grant Lee Gear Corp., Cleveland, O.
 Hart—Hartford Auto Parts Corp., Hartford, Conn.
 Hoos—Hoosier Clutch Co., Muncie, Ind.
 HS—Merchant & Evans Co., Phila., Pa.
 M-E—Merchant & Evans Co., Phila., Pa.
 MM—Mechanics Mach. Co., Rockford, Ill.
 Mun—Muncie Gear Works, Muncie, Ind.
 W-Gr—Warner Gear Co., Muncie, Ind.

Universal:

Acm—
 Bld—Blood Bros. Mach Co., Allegan, Mich.
 Det—Universal Products Co., Detroit, Mich.
 Hart—Hartford Auto Parts Corp., Hartford, Conn.
 MM—Mechanics Machine Co., Rockford, Ill.
 M-E—Merchant & Evans Co., Phila., Pa.
 Pet—Cleveland Universal Parts Co., Cleveland, Ohio.
 Pick—Carl Pick Co., West Bend, Wis.
 Sned—Sned & Co., Jersey City, N. J.
 Spic—Spicer Mfg. Corp., S. Plainfield, N. J.
 Ther—Thermoid Rubber Co., Trenton, N. J.
 UM—Universal Machine Co., Bowling Green, Ohio.
 UP—Universal Products Co., Detroit, Mich.

Springs:

Am—American Auto Parts Co., Detroit, Mich.
 Arm—General Motors Co., Pontiac, Mich.
 Bea—Beans Spring Co., Inc., Massillon, O.
 Bet—Betts Bros. Spring Co., Inc., San Francisco, Cal.
 Cham—Champion Auto Spring Co., St. Louis, Mo.
 Del—D. Delany & Son, Newark, N. J.
 Det—Detroit Steel Products Co., Detroit, Mich.
 GC—Garden City Spring Works, Chicago, Ill.
 Har—Harvey Spring & Forging Co., Racine, Wis.
 IC—Iron City Spring Co., Pittsburgh, Pa.
 Lig—Liggett Spring & Axle Co., Monongahela, Pa.
 Mar—Maremont Mfg. Co., Chicago, Ill.
 Math—Mather Spring Co., Toledo, O.
 Mer—E. R. Merrill Spring Co., New York.
 Pen—Penn Spring Works, Baldwinsville, N. Y.
 Per—Perfection Spring Co., Cleveland, O.
 Phill—Phila. Springs Works, Phila., Pa.
 P.S.—Point Spring Co., Pittsburgh, Pa.
 Row—William & Harvey Rowland, Philadelphia, Pa.
 Shel—Sheldon Axle & Spring Co., Wilkes-Barre, Pa.
 SP—Spring Perch Co., Stratford, Conn.
 SS—Standard Steel Spring Co., Coraopolis, Pa.
 Ster—Sterling Spring Co., Cleveland, Ohio.
 Tem—Temme Spring Corp., Chicago, Ill.
 Tut—Tuthill Spring Co., Chicago, Ill.
 US—United States Spring Co., Los Angeles, Cal.
 Vul—Jenkins Vulcan Spring Co., Richmond, Ind.

Front and Rear Axles:

At—Atlas Axle Co., Wilmington, Del.
 Clark—Clark Equipment Co., Buchanan, Mich.
 Col—Columbia Axle Co., Cleveland, O.
 Cont—Continental Axle Co., Edgerton, Wis.
 Dod—Dodge Bros. Co., Detroit, Mich.
 Eat—Eaton Axle Co., Cleveland, Ohio.
 Fl—Flint Motor Axle Co., Flint, Mich.
 Huck—Huck Axle Co., Chicago, Ill.
 LM—L. M. Axle Co., Cleveland, Ohio.
 Russel—Russel Motor Axle Co., Detroit, Mich.
 Sals—Salisbury Axle Co., Jamestown, N. Y.
 Shel—Sheldon Axle & Spring Co., Wilkes-Barre, Pa.
 Shul—Shuler Axle Co., Inc., Louisville, Ky.
 Stn—Standard Parts Co., Cleveland, O.
 Tim—Timken Detroit Axle Co., Detroit, Mich.
 Torb—Eaton Axle & Spring Co., Cleveland, Ohio.
 Vul—Vulcan Motor Axle Co.
 Walk—Walker Axle Co., Chicago, Ill.
 Wis—Wisconsin Parts Co., Oshkosh, Wis.

Steering Gear:

CAS—C. A. S. Products Co., Columbus, O.
 Dit—Ditwiler Mfg. Co., Galion, Ohio.
 Dod—Dodge Bros. Co., Detroit, Mich.
 Gem—Gemmer Mfg. Co., Detroit, Mich.
 Jac—Saginaw Products Co., Saginaw, Mich.
 Lav—Lavine Gear Co., Milwaukee, Wis.
 M-P—Muncie Gear Works Corp., Muncie, Ind.
 Ros—Ross Gear & Tool Co., Lafayette, Ind.
 Sag—Saginaw Products Co., Saginaw, Mich.
 Woh—Wohrhab Gear Co., Racine, Wis.

Wheels:

Arc—Archibald Wheel Co., Lawrence, Mass.
 AuW—Auto Wheel Co., Lansing, Mich.
 Bim—Bimel Spoke & Auto Wheel Co., Portland, Ind.
 Bud—Budd Wheel Co., Phila., Pa.
 Cla—Clark Equipment Co., Buchanan, Mich.
 Day—Dayton Steel Foundry Co., Dayton, Ohio.
 Det—Detroit Panel & Plywood Co., Detroit, Mich.
 Dis—Disteel Wheel Corp., Detroit, Mich.
 Hay—Hayes Wheel Co., Jackson, Mich.
 Hoo—Hoopes Bros. & Darlington, Inc., West Chester, Pa.
 Ind—Indestructible Wheel Co., Lebanon, Ind.
 Jon—Jones, Phineas & Co., Newark, N. J.
 Kel—Kelsey Wheel Co., Detroit, Mich.
 MM—Michigan Malleable Iron Co., Detroit.
 Mot—Motor Wheel Corp., Lansing, Mich.
 Mun—Muncie Wheel Co., Muncie, Ind.
 Nor—Northern Wheel Corp., Alma, Mich.
 Pru—Prudden Wheel Co., Lansing, Mich.
 Roy—Royer Wheel Co., Aurora, Ind.
 Sch—Schwarz Wheel Co., Phila., Pa.
 Smi—Smith Wheel, Inc., Syracuse, N. Y.
 StM—St. Mary's Wheel Co., St. Marys, O.
 Stn—Standard Wheel Co., Terre Haute, Ind.
 Van—Van Wheel Corp., Oneida, N. Y.
 Wal—Walker Axle Co., Chicago, Ill.
 Way—Wayne Wheel Co., Newark, N. Y.
 Whit—Whitcomb Wheel Co., Kenosha, Wis.

Rim Equipment:

Fir—Firestone Steel Products Co., Akron, Ohio.
 Gdy—Goodyear Tire & Rubber Co., Akron, Ohio.
 Hay—Hayes Wheel Co., Jackson, Mich.
 Jax—Jaxon Steel Products Co., Jackson, Mich.
 Kel—Kelsey Wheel Co., Detroit, Mich.
 Mil—Miller Rubber Co., Akron, Ohio.

Battery (Make):

Exi—Electric Storage Battery Co., Phila., Pa.
 Gl—Globe Electric Co., Milwaukee, Wis.
 Gld—Gould Storage Battery Co., New York, N. Y.
 Hob—Hobbs Storage Battery Co., Los Angeles, Cal.
 POL—Prest-O-Lite Co., Inc., Indianapolis, Ind.
 USL—U. S. Light & Heat Corp., Niagara Falls, N. Y.
 Wes—Westinghouse Corp., Niagara Falls, N. Y.
 Wil—Willard Elec. & Mfg. Co., Springfield, Mass.

Valve Arrangement:

D—Head & Side
 H—Overhead
 L—ELL—Head
 S—Sleeve
 T—TEE—Head

Lubrication:

FS—Force and Splash
 F—Force Feed
 S—Splash

Fuel Feed:

G—Gravity
 P—Pressure
 V—Vacuum

Location of Gearset:

A—Amidships
 J—Unit with jackshaft
 R—Rear
 U—Unit with engine

Final Drive:

B—Bevel Gear
 C—Chain
 I—Internal Gear
 P—Spur
 R—Double Reduction
 S—Spiral Bevel
 W—Worm

Rear Axle (Type):

F—Floating
 D—Dead
 $\frac{1}{2}$ —Semi-Floating
 $\frac{3}{4}$ — $\frac{1}{4}$ -Floating

Brake (Location):

A—Rear Wheels entirely
 B—Drive Shaft and Rear Wheels
 C—Front and Rear Wheel

dth
Clearance at
Lowest Point
of Chassis

Commercial Car Specifications—Corrected Monthly

The Specifications, Chassis Prices, Etc., Are Corrected Each Month From Data Supplied Direct by the Makers. Gasoline Tractor-Trucks

Will be Found at the End of Gasoline Commercial Cars

See Preceding Table for Replacement Data.

(Where prices are not given it is because we have been unable to get them from authoritative sources)

Kearns H.	1950	H-SP 7000	324x56	19.6 L	Own	W-G	B-Li 30	U 3	Pick Mar	Tim 1452	W	U 3	Spic Math	.../...	U 3	Spic Math	34x5*	34x5*	34x5*
King Zeiter	1950	Cont N	324x56	24.1 L	Own	McC	W-G	.../...	U 3	Spic Math	.../...	U 3	Spic Math	34x5*	34x5*	34x5*	34x5*	34x5*	34x5*
Kissel Express	1958	Own 80000	324x56	24.1 L	Own	McC	W-G	.../...	U 3	Spic Math	.../...	U 3	Spic Math	34x5*	34x5*	34x5*	34x5*	34x5*	34x5*
Krebs, Eddie	1944	FE-350	324x56	17.6 L	Own	F's	Zen	Y	U 3	Spic	B-Li 30	U 3	Spic	Per	Col 52000	0.25.21	Ros	Van	Fir
Menardine, G. Courtney	1965	FE-350	324x56	17.6 L	Own	F's	Zen	Y	U 3	Spic	B-Li 30	U 3	Spic	Per	US Tim 1250	0.25.21	Ros	Van	Fir
Moreland R.R. - Bus	1950	Wis SU	4x56	25.6 L	Own	F's	Zen	Y	U 3	Spic	B-Li 30	U 3	Spic	Per	US Tim 1250	0.25.21	Ros	Van	Fir
Moreland R.R. - Bus	1950	Her-O	4x56	25.6 L	Own	F's	Zen	Y	U 3	Spic	B-Li 30	U 3	Spic	Per	US Tim 1250	0.25.21	Ros	Van	Fir
Nash 2018	1955	Own 4	324x56	22.5 L	Own	F's	Zen	Y	U 3	Spic	B-Li 30	U 3	Spic	Per	Har Cwn Math Tim 1452	0.25.21	Ros	Van	Fir
National PA.	1955	Wau BUX	324x56	22.5 L	Own	F's	Zen	Y	U 3	Spic	B-Li 30	U 3	Spic	Per	Math Tim 1452	0.25.21	Ros	Van	Fir
Nelson-LeMoon G-1	1955	Buds WTU	324x56	22.5 L	Own	F's	Zen	Y	U 3	Spic	B-Li 30	U 3	Spic	Per	Math Tim 1452	0.25.21	Ros	Van	Fir
Noble A.75	1955	Cont N	324x56	22.5 L	Own	F's	Zen	Y	U 3	Spic	B-Li 30	U 3	Spic	Per	Math Tim 1452	0.25.21	Ros	Van	Fir
Oden A.75	1955	Buds WTU	324x56	22.5 L	Own	F's	Zen	Y	U 3	Spic	B-Li 30	U 3	Spic	Per	Math Tim 1452	0.25.21	Ros	Van	Fir
Parker B-23	1955	Cont N	324x56	22.5 L	Own	F's	Zen	Y	U 3	Spic	B-Li 30	U 3	Spic	Per	Math Tim 1452	0.25.21	Ros	Van	Fir
Patriot 7R	1955	Own	324x56	22.5 L	Own	F's	Zen	Y	U 3	Spic	B-Li 30	U 3	Spic	Per	Math Tim 1452	0.25.21	Ros	Van	Fir
Pioneer AA (Chicago)	1955	GBS	324x56	22.5 L	Own	F's	Zen	Y	U 3	Spic	B-Li 30	U 3	Spic	Per	Math Tim 1452	0.25.21	Ros	Van	Fir
Rainier B-29	1950	Cont N	324x56	22.5 L	Own	Eis	Mon	V	U 3	Spic	B-Li 30	U 3	Spic	Per	Math Tim 1452	0.25.21	Ros	Van	Fir
Sandow W-10	1955	Cont R-G-6	324x56	22.5 L	Own	Eis	Dy	V	U 3	Spic	B-Li 30	U 3	Spic	Per	Math Tim 1452	0.25.21	Ros	Van	Fir
Signor N-F	1955	Cont J-4	324x56	22.5 L	Own	Eis	Sim	V	U 3	Spic	B-Li 30	U 3	Spic	Per	Math Tim 1452	0.25.21	Ros	Van	Fir
Stewart 16	1955	Lyo	324x56	22.5 L	Own	Eis	Rm	V	U 3	Spic	B-Li 30	U 3	Spic	Per	Math Tim 1452	0.25.21	Ros	Van	Fir
Transport 16	1955	Cont N	324x56	22.5 L	Own	F's	Zen	V	U 3	Spic	B-Li 30	U 3	Spic	Per	Math Tim 1452	0.25.21	Ros	Van	Fir
Triangle AA	1955	H-SP	324x56	22.5 L	Own	F's	Zen	V	U 3	Spic	B-Li 30	U 3	Spic	Per	Math Tim 1452	0.25.21	Ros	Van	Fir
United Highway Spec.	1955	H-SP 7000	324x56	22.5 L	Own	F's	Zen	V	U 3	Spic	B-Li 30	U 3	Spic	Per	Math Tim 1452	0.25.21	Ros	Van	Fir
Wachusett S.	2400	Cont 8R	324x56	22.5 L	Own	F's	Zen	V	U 3	Spic	B-Li 30	U 3	Spic	Per	Math Tim 1452	0.25.21	Ros	Van	Fir
Walker Johnson L.	2500	Hin BX	324x56	22.5 L	Own	F's	Zen	V	U 3	Spic	B-Li 30	U 3	Spic	Per	Math Tim 1452	0.25.21	Ros	Van	Fir
Wichts K.	1875	Buds WTU	324x56	22.5 L	Own	F's	Zen	V	U 3	Spic	B-Li 30	U 3	Spic	Per	Math Tim 1452	0.25.21	Ros	Van	Fir
Wilcox AA	1950	Wau Y-A	324x56	22.5 L	Own	F's	Zen	V	U 3	Spic	B-Li 30	U 3	Spic	Per	Math Tim 1452	0.25.21	Ros	Van	Fir
Yellow Cab Express Ti	1955	Cont V4	324x56	22.5 L	Own	F's	Zen	V	U 3	Spic	B-Li 30	U 3	Spic	Per	Math Tim 1452	0.25.21	Ros	Van	Fir
Wachusett S.	2400	Own 2	324x56	18.1 L	Own	S	Strm	G	A 3	Spic	B-Li 30	U 3	Spic	Per	Own Own Own	8.3	33.2	Ros	Hoo
Walker Johnson L.	2500	Own 2	324x56	18.1 L	Own	S	Strm	G	A 3	Spic	B-Li 30	U 3	Spic	Per	Own Own Own	8.3	33.2	Ros	Hoo
Clinton 20	2070	Buds WTU	324x56	18.1 L	Own	S	Strm	G	A 3	Spic	B-Li 30	U 3	Spic	Per	Own Own Own	8.3	33.2	Ros	Hoo
Clydesdale 10A	1955	Cont N	324x56	18.1 L	Own	S	Strm	G	A 3	Spic	B-Li 30	U 3	Spic	Per	Own Own Own	8.3	33.2	Ros	Hoo
Defiance G-2	1955	Cont N	324x56	18.1 L	Own	S	Strm	G	A 3	Spic	B-Li 30	U 3	Spic	Per	Own Own Own	8.3	33.2	Ros	Hoo
Defiance GL-2	1955	Cont N	324x56	18.1 L	Own	S	Strm	G	A 3	Spic	B-Li 30	U 3	Spic	Per	Own Own Own	8.3	33.2	Ros	Hoo
Dependable A.	1955	Buds MU	324x56	18.1 L	Own	S	Strm	G	A 3	Spic	B-Li 30	U 3	Spic	Per	Own Own Own	8.3	33.2	Ros	Hoo
Diamond T-Q-3	1955	Hin 700	324x56	18.1 L	Own	S	Strm	G	A 3	Spic	B-Li 30	U 3	Spic	Per	Own Own Own	8.3	33.2	Ros	Hoo
Eade J-10	1955	Lyo CT-7	324x56	18.1 L	Own	S	Strm	G	A 3	Spic	B-Li 30	U 3	Spic	Per	Own Own Own	8.3	33.2	Ros	Hoo
Harbelle-Deyo X-2	1955	Cont N	324x56	18.1 L	Own	S	Strm	G	A 3	Spic	B-Li 30	U 3	Spic	Per	Own Own Own	8.3	33.2	Ros	Hoo
Macar E.X.	1955	Wis CAU	324x56	18.1 L	Own	S	Strm	G	A 3	Spic	B-Li 30	U 3	Spic	Per	Own Own Own	8.3	33.2	Ros	Hoo
Master 11.	2000	Wuds WTU	324x56	18.1 L	Own	S	Strm	G	A 3	Spic	B-Li 30	U 3	Spic	Per	Own Own Own	8.3	33.2	Ros	Hoo
Menardine Hit.	1955	Cont N	324x56	18.1 L	Own	S	Strm	G	A 3	Spic	B-Li 30	U 3	Spic	Per	Own Own Own	8.3	33.2	Ros	Hoo
Perfection B.	1955	Cont N	324x56	18.1 L	Own	S	Strm	G	A 3	Spic	B-Li 30	U 3	Spic	Per	Own Own Own	8.3	33.2	Ros	Hoo
Reo F Speedwagon	1955	Cont N	324x56	18.1 L	Own	S	Strm	G	A 3	Spic	B-Li 30	U 3	Spic	Per	Own Own Own	8.3	33.2	Ros	Hoo
Ruggles 20-R	1955	Lyo C	324x56	18.1 L	Own	S	Strm	G	A 3	Spic	B-Li 30	U 3	Spic	Per	Own Own Own	8.3	33.2	Ros	Hoo
Service 25	1955	Standard 75 Speed Truck	324x56	18.1 L	Own	S	Strm	G	A 3	Spic	B-Li 30	U 3	Spic	Per	Own Own Own	8.3	33.2	Ros	Hoo
Stewart 15 X	1955	Cont N	324x56	18.1 L	Own	S	Strm	G	A 3	Spic	B-Li 30	U 3	Spic	Per	Own Own Own	8.3	33.2	Ros	Hoo
Stoughton C.	1955	Buds WTU	324x56	18.1 L	Own	S	Strm	G	A 3	Spic	B-Li 30	U 3	Spic	Per	Own Own Own	8.3	33.2	Ros	Hoo
U.S. U.	1955	Cont V-4	324x56	18.1 L	Own	S	Strm	G	A 3	Spic	B-Li 30	U 3	Spic	Per	Own Own Own	8.3	33.2	Ros	Hoo
Yellow Cab M42-J-14	1955	Cont V-4	324x56	18.1 L	Own	S	Strm	G	A 3	Spic	B-Li 30	U 3	Spic	Per	Own Own Own	8.3	33.2	Ros	Hoo
Bessemier H2	1955	Cont N	324x56	22.5 L	Mod	F	Zen	V	Eis	Wes	B-Li 35	U 4	UMI	Per	Shul 350	7.75	41.5	Ros	Sch
Arnleder 21B.	2550	Buds GTU	4x56	22.5 L	Mod	F	Zen	V	Eis	Wes	B-Li 35	U 4	UMI	Per	Shul 350	7.75	41.5	Ros	Sch
Arnleder 40B.	2800	Wis SU	4x56	22.5 L	Mod	F	Zen	V	Eis	Wes	B-Li 35	U 4	UMI	Per	Shul 350	7.75	41.5	Ros	Sch
Arnleder 40C.	2800	Cont C-4	4x56	22.5 L	Mod	F	Zen	V	Eis	Wes	B-Li 35	U 4	UMI	Per	Shul 350	7.75	41.5	Ros	Sch
Afterbury 20R	2475	Own 2	4x56	22.5 L	Mod	F	Zen	V	Eis	Wes	B-Li 35	U 4	UMI	Per	Shul 350	7.75	41.5	Ros	Sch
Commerce 14B	1950	Cont J-4	4x56	22.5 L	Mod	F	Zen	V	Eis	Wes	B-Li 35	U 4	UMI	Per	Shul 350	7.75	41.5	Ros	Sch
Corbit D-22	2150	Cont J-4	324x56	22.5 L	Mod	F	Zen	V	Eis	Wes	B-Li 35	U 4	UMI	Per	Shul 350	7.75	41.5	Ros	Sch
Day-Elder AN	2150	Cont B-14	324x56	22.5 L	Mod	F	Zen	V	Eis	Wes	B-Li 35	U 4	UMI	Per	Shul 350	7.75	41.5	Ros	Sch
DeJante D-AN	2150	Cont C-4	324x56	22.5 L	Mod	F	Zen	V	Eis	Wes	B-Li 35	U 4	UMI	Per	Shul 350	7.75	41.5	Ros	Sch
Diehl B.	2150	Cont J-4	324x56	22.5 L	Mod	F	Zen	V	Eis	Wes	B-Li 35	U 4	UMI	Per	Shul 350	7.75	41.5	Ros	Sch
D-Ort 44	2450	Mid 408	324x56	22.5 L	Mod	F	Zen	V	Eis	Wes	B-Li 35	U 4	UMI	Per	Shul 350	7.75	41.5	Ros	Sch

For full name and address of manufacturer and information regarding complete line see page 52

for full name and address of manufacturer and information regarding complete line see page 52

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For full name and address of manufacturer and information regarding complete line see page 62

TRADE NAME AND MODEL	Chassis Prefix	ENGINE DETAILS				GEARSET				FRONT AXLE		REAR AXLE		TIRES, WHEELS, RIMS		
		Make and Model Number	4 cylinder unless otherwise noted.	Cylinder (Make)	Stroke	Make and Model Number	Location	Speeds	Universal (Make)	Springs (Make)	Front	Rear	Pneumatic + Dual + Solid	Wheels (Make)	Front	Rear
3½ Ton		Cont L-4	415516	32.4 L	GO	B.B. Cott S	Del	D	Bid	Tim 1630B	W	Tim 6660	F	10.33 53.72 Ros	6983 168	
Aeone 90	4950	Own	415516	28.9 L	Bus F	Zen Strm	Spn	Own	Own	Tim 6666	W	Tim 6666	F	10.33 52.7 Ros	6983 165	
American-LaFrance 3R	4200	Buda Y TU	415516	32.4 L	Own S	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.33 55.7 Ros	6983 165	
Armeled KWB	4200	Own	415516	32.4 L	Own S	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.33 55.7 Ros	6983 165	
Armeled KWC	4200	Cont E-4	415516	32.4 L	Own S	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.33 55.7 Ros	6983 165	
Attberry 22DX Short	4375	Cont L-4	415516	32.4 L	Own F	Zen	Pier	Pier	Own	Tim 1630B	W	Tim 6666	F	10.33 55.26 Gem	6983 150	
Attberry 22D Std.	4375	Cont L-4	415516	32.4 L	Own F	Zen	Pier	Pier	Own	Tim 1630B	W	Tim 6666	F	10.33 55.26 Gem	6983 150	
Attberry 22D LWB	4375	Cont L-4	415516	32.4 L	Own F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.33 55.26 Gem	6983 150	
Available JH3½	4175	Her MU-3	415516	32.4 L	Own F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.33 59.9 Ros	6983 174	
Brockway R-5	4175	Cont L-4	415516	32.4 L	Own F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.33 59.9 Ros	6983 174	
Chicago 35	4175	Her MU-3	415516	32.4 L	Own F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.33 59.9 Ros	6983 174	
Clydesdale 6	3550	Cont L-4	415516	32.4 L	Own F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Dependable G	3550	Buda Y TU	415516	32.4 L	Own F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Diamond T-K	4070	Cont L-4	415516	32.4 L	Own F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Dixon K7	4070	Own	415516	32.4 L	Own F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Dorris K7	4070	Own	415516	32.4 L	Own F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Duplex E (f. w. d.)	3950	Buda Y TU	415516	32.4 L	Own F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Gary K	3950	Buda Y TU	415516	32.4 L	Own F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
G. M. C. K71A	3950	...	415516	32.4 L	Own F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
G. M. C. K71B	3950	...	415516	32.4 L	Own F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Gramm-Bernstein 75P	4225	Hin HA 200	415516	32.4 L	Own F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Grass Premier 90...	3700	Wau D	415516	32.4 L	Own F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Harvey Premium 90...	3700	Buda Y TU	415516	32.4 L	Own F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Hawkeye N.	3700	...	415516	32.4 L	Own F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Indiana 35	3700	...	415516	32.4 L	Own F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Jumbo 35...	3700	Buda Y BU	415516	32.4 L	Own F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Kearns T	4000	Wis V AU	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Kleiber	4850	Cont L-4	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Kelly-Springfield K41	4850	Own	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Kenworth L.	4850	Buda Y TU	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
King Zeitzer	3825	Cont L-4	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Krebs L110	4850	...	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Krebs B120...	4450	Cont L-4	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Lange F...	4450	Cont L-4	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Larriba L-4...	4450	Cont L-4	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Luedinghaus	4450	Wau D	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Mack AC...	4450	Own AC	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Master 51...	3800	Wau D	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Menominee G...	3800	Wis V AU	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Nobie E-71...	3850	Buda Y TU	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Nelson & LeMoon G 4	4200	Cont L-4	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Northway B-3...	4200	Own	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Ogden F...	4250	Old Reliable C...	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Oneida D...	4050	Hin 200	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Parker J-24...	4300	Wis V AU	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Perfection E...	2975	Cont K-4	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Pittsburgh D...	3800	Own	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Power C...	4400	Hin HA-200	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Rainier R-26	3895	Cont L-4	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Sandow M...	3550	Cont L-4	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Service 72...	3550	Buda EB-U-1	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Signal M...	3550	Cont L-4	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Standard 3½-5...	3550	Cont L-4	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Standard 3½-5-KS...	4750	Cont L-4	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Sterling	3540	Own	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Stewart 10-X...	4100	Wis	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Super Truck 70	3500	Own	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Transport 61...	3500	Twin City AW	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
White 40...	4200	Own GR...	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Ward La France 4A...	4200	Own GR...	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
White 40...	3950	Buda Y TU	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Wilcox E...	4600	Buda Y TU	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
Wisconsin (six-wheel)	3950	Buda Y TU	416516	32.4 L	Bus F	Zen	Phar	Phar	Own	Tim 1630B	W	Tim 6666	F	10.25 49.5 Ros	6983 164	
4 Ton																
Aero-K...	4350	Wau...	416516	36.1 L	GO	Spn	SPN	SPN	SPN	SPN	SPN	SPN	SPN	SPN	SPN	SPN
Americo...	4350	Wau...	416516	36.1 L	GO	Spn	SPN	SPN	SPN	SPN	SPN	SPN	SPN	SPN	SPN	SPN

Transport of AW	3500	Own	B-Li	Sim.	Row	Tim 1630B	W	Tim 0000	A	Spic	Row	Tim 11.7	48	26	Own	3855	147	924		
United 80	4200	Own	B-Li	Own	Own	Own	R	Own	A	4	Own	Row	Tim 11.7	48	26	Own	3855	147	924	
Ward La. France AA	4200	Own	GR	Own	Own	Own	R	Own	A	4	Own	Row	Tim 11.7	48	26	Own	3855	147	924	
White 40	4200	Own	B-Li	Own	Own	Own	R	Own	A	4	Own	Row	Tim 11.7	48	26	Own	3855	147	924	
Wilcox E. Wisconsin (six-wheeler)	3800	Own	B-Li	Own	Own	Own	R	Own	A	4	Own	Row	Tim 11.7	48	26	Own	3855	147	924	
4 Ton																				
Season K-4	4200	Wau	Cont B-5	V	Wau	Bos	B-B.	Cott R	A	4	Bld	Det	Tim 1630B	W	Tim 0666	F	5.2	180*	924	
Acme 90L	4200	Her MU	3	GÖ	Rayf	Dup	Pier	Cott S	A	4	Bld	SP	Tim 40-O	W	Tim 0660	F	8.75	117	924	
American	4275	Wis	4x5 1/2	GO	F	Strm	Phar	Cott R	A	4	Aern	SP	Own	W	Tim 900	F	10	158	924	
Autocar L.	4300	Own	4x5 1/2	GO	S	Strm	Phar	Own	A	4	Spic	SP	Own	R	Own	F	9.89	156	924	
Autocar M.	4350	Own	4x5 1/2	GO	S	Strm	Phar	Own	A	4	Spic	SP	Own	R	Own	F	10	156	924	
Besserman K2	4300	Cont L-7	GO	S	Strm	Phar	Phar	Shul 610	A	4	M-E	Per	Tim 6666	W	Shel W-32	F	8.75	178	924	
Corbitt A.	4200	Buda YTU	4x2 1/2	GO	S	Strm	Phar	Shel 610	A	4	M-E	Per	Tim 6666	W	Shel W-32	F	8.75	178	924	
Day-Elder FN	3800	Cont L-4	GO	S	Strm	Phar	Phar	Shel 610	A	4	M-E	Per	Tim 1544	W	Tim 6666	F	13.00	165	924	
Buda YBU	4200	Buda YTU	4x2 1/2	GO	S	Strm	Phar	Shel 610	A	4	M-E	Per	Tim 1544	W	Tim 6666	F	13.00	165	924	
DeMartini	5000	Wau YU	4x2 1/2	GO	S	Strm	Phar	Shel 610	A	4	M-E	Per	Math	Tim 1630B	W	Tim 6666	F	10.33	157	924
Fageol	4200	Cont L-4	GO	S	Strm	Phar	Phar	Shel 610	A	4	M-E	Per	Math	Tim 1630B	W	Tim 6666	F	10.33	157	924
Federal WL	4200	Wau YU	4x2 1/2	GO	S	Strm	Phar	Shel 610	A	4	M-E	Per	Math	Tim 1630B	W	Tim 6666	F	10.33	157	924
Garfield 80.	4200	Buda YTU	4x2 1/2	GO	S	Strm	Phar	Shel 610	A	4	M-E	Per	Math	Tim 1630B	W	Tim 6666	F	10.33	157	924
Goffredson 80.	4200	Buda YBU	4x2 1/2	GO	S	Strm	Phar	Shel 610	A	4	M-E	Per	Math	Tim 1630B	W	Tim 6666	F	10.33	157	924
Grom Pioneer 40	3850	Hin HA200	4x2 1/2	GO	S	Strm	Phar	Shel 610	A	4	M-E	Per	Math	Tim 1630B	W	Tim 6666	F	10.33	157	924
Hurlburt C.	4200	Buda YTU	4x2 1/2	GO	S	Strm	Phar	Shel 610	A	4	M-E	Per	Math	Tim 1630B	W	Tim 6666	F	10.33	157	924
Kimball AM.	4335	Wis VAU	4x2 1/2	GO	S	Strm	Phar	Shel 610	A	4	M-E	Per	Math	Tim 1630B	W	Tim 6666	F	10.33	157	924
Kimball AF.	4360	Wis RAU	4x2 1/2	GO	S	Strm	Phar	Shel 610	A	4	M-E	Per	Math	Tim 1630B	W	Tim 6666	F	10.33	157	924
Kissel Heavy Duty.	3675	Own 14000	4x5 1/2	GO	S	Strm	Phar	Shel 610	A	4	M-E	Per	Math	Tim 1630B	W	Tim 6666	F	10.33	157	924
Macear M2...	4200	Wis VAU	4x2 1/2	GO	S	Strm	Phar	Shel 610	A	4	M-E	Per	Math	Tim 1630B	W	Tim 6666	F	10.33	157	924
Perfection E-4 1/2	4600	Cont B-5	GO	S	Strm	Phar	Phar	Shel 610	A	4	M-E	Per	Math	Tim 1630B	W	Tim 6666	F	10.33	157	924
Pierce Arrow WC	4600	Own	4x5 1/2	GO	S	Strm	Phar	Shel 610	A	4	M-E	Per	Math	Tim 1630B	W	Tim 6666	F	10.33	157	924
Republic 20.	4200	Wau YU	4x2 1/2	GO	S	Strm	Phar	Shel 610	A	4	M-E	Per	Math	Tim 1630B	W	Tim 6666	F	10.33	157	924
Rowe H.W.	4200	Wau YU	4x2 1/2	GO	S	Strm	Phar	Shel 610	A	4	M-E	Per	Math	Tim 1630B	W	Tim 6666	F	10.33	157	924
Schacht	4200	Wau YAU	4x2 1/2	GO	S	Strm	Phar	Shel 610	A	4	M-E	Per	Math	Tim 1630B	W	Tim 6666	F	10.33	157	924
Service 81...	4200	Wau YAU	4x2 1/2	GO	S	Strm	Phar	Shel 610	A	4	M-E	Per	Math	Tim 1630B	W	Tim 6666	F	10.33	157	924
Union HW	4200	Wau YAU	4x2 1/2	GO	S	Strm	Phar	Shel 610	A	4	M-E	Per	Math	Tim 1630B	W	Tim 6666	F	10.33	157	924
U.S. S...	4200	Wau DU	4x2 1/2	GO	S	Strm	Phar	Shel 610	A	4	M-E	Per	Math	Tim 1630B	W	Tim 6666	F	10.33	157	924
Wichita O.	3600	Wau DU	4x2 1/2	GO	S	Strm	Phar	Shel 610	A	4	M-E	Per	Math	Tim 1630B	W	Tim 6666	F	10.33	157	924
5 Ton																				
Season M...	4250	Wau EU	5x0 1/2	L	FS	Zen	Mon	V	A	4	Bld	Det	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
Acme 125	4200	Cont B-5	4x5 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
American	4200	Wis	4x5 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
American-LaFrance 5R	4500	Own	4x5 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
Attberry 8E-LWB...	4200	Wau YAU	4x5 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
Autocar L.	4200	Wau YAU	4x5 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
Autocar M.	4200	Wau YAU	4x5 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
Autocar T-3	5575	Own	4x5 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
Brooklyn T6	4200	Cont B-7	4x5 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
Chicago 50	4200	Her MU-3	4x5 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
Clydeade 4.	4200	Buda BTU	4x5 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
Corbitt AA.	4200	Cont B-5	4x5 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
Day-Elder EN...	4200	Cont B-5	4x5 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
Denby 210.	4200	Hin-Class B	4x5 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
Diamond T-S	4200	Own	4x5 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
Dixon B-5	4200	Mid 400	4x5 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
Fageol	4200	Wau DU	4x5 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
Federal X-2.	4200	Cont B-5	4x5 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
Kearns TF...	4200	Buda BTU	5x0 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
Gary M...	4200	Buda BTU	5x0 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
G.M.C. K-10IA	4200	Wau YAU	5x0 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
G.M.C. K-10IB	4200	Wau YAU	5x0 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
Goffredson 100	4200	Wau DU	5x0 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
Graham-Pioneer 50-80.	4200	Wau EU	5x0 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
Indiana 5J.	4200	Own	4x5 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
International 101...	4200	Buda YAU	4x5 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
Jumbo 50...	4200	Wau EU	4x5 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
King Zeitzer...	4200	Cont B-5	4x5 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
Kleiber...	5200	Wau YAU	4x5 1/2	L	FS	Zen	Mon	V	A	4	Bld	SP	Tim 1730-B	W	Tim 6760	F	10.25	187	924	
Linddinghaus...	5200	Wau YAU	4x5 1/2	L	FS	Zen	Mon	V	A	4										

For full name and address of manufacturer and information regarding complete line see page 52

TRADE NAME AND MODEL	CLASS & PRICE	ENGINE DETAILS				GEARSET				REAR AXLE		FRONT AXLE and Model Number		MAKE and Model Number		TYPE	TIRES, WHEELS, RIMS		
		Make and Model Number	Bore and Stroke	Valve Arrangement	N.A.C.C.	Cylinder System	Carburetor	Fuel Feed	Generator	Cylinders (Make)	Location	Speeds	Springs (Make)	Universal Joint (Make)	Steering Gear	Front Gear Ratio	Rear Gear Ratio	Front Tire	Rear Tire
5 Ton—Con'd																			
Rowe FW.....	4850	Wis VAU	4 $\frac{1}{2}$ x 6	32.4 L		Bus	Zen	Shel	Shel 5A30	W	Shel W-5'	1/6	10.25	40.7	Ros	36x6	40x6	4.5	Smi
Sandow L.....	4500	Cont B-5	4 $\frac{1}{2}$ x 6	32.4 L		Bos	Mon	Shel	Tim 1730	W	Shel 4FA20	1/11	11.0	46.6	Ros	36.6	40x4	4.5	Van Fir
Sanford W-50.....	4500	Cont B-7	5 x 6	36.1 L		Bos	Phar	Shel	Shel 5A30	W	Shel 5A30	1/12	10.75	52.03	Ros	36.6	40x4	4.5	Van Fir
Schacht.....	4800	Wis VAU	4 $\frac{1}{2}$ x 6	32.4 L		Bos	Con	Shel	Tim 1730	W	Shel 4FA20	1/14	11.0	66.5	Own	36.5	40x4	4.5	Van Fir
Selden Unit 90.....	4650	Cont B-5	4 $\frac{1}{2}$ x 6	36.1 L		Bos	Dyn	Shel	Shel 5A30	W	Shel 5A30	1/12	10.25	55	Gem	36.6	40x4	4.5	Van Fir
Selden Unit 72.....	4475	Cont B-5	4 $\frac{1}{2}$ x 6	36.1 L		Bos	Phar	Shel	Tim 1730	W	Shel 4FA20	1/12	10.25	55	Gem	36.6	40x4	4.5	Van Fir
Signal R.....	5400	Cont B-5	4 $\frac{1}{2}$ x 6	36.1 L		Bos	Dyn	Shel	Shel 5A30	W	Shel 5A30	1/12	10.25	55	Gem	36.6	40x4	4.5	Van Fir
Sterling Worm.....	5400	Own	5 x 6	40 L		Bos	Phar	Shel	Tim 1730	W	Shel 5A30	1/12	11.6	56.43	Ros	36.6	40x4	4.5	Gid
Sterling-Chain EHD.....	6000	Own	5 x 6	40 L		Bos	Zen	Shel	Tim 1730	W	Shel 5A30	1/12	11.6	56.43	Ros	36.6	40x4	4.5	Gid
Sterling-Chain ELD.....	5450	Own	4 $\frac{1}{2}$ x 6	32.4 L		Bos	Math	Shel	Tim 1730	W	Shel 5A30	1/12	11.6	56.43	Ros	36.6	40x4	4.5	Gid
Super Truck 100.....	4500	Wis	4 $\frac{1}{2}$ x 6	36.1 L		Bos	Math	Shel	Tim 1730	W	Shel 5A30	1/12	11.6	56.43	Ros	36.6	40x4	4.5	Gid
Transport 75.....																			
Taylor F.....	4700	Buda YTU	4 $\frac{1}{2}$ x 6	32.4 L		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
Ultimate D.....	5500	Buda BTU	5 x 6	32.4 L		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
U.S. S. Special.....	4500	Hin	4 $\frac{1}{2}$ x 6	32.4 L		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
Ward La France A.....	4890	Ward La France A.....	5 x 6	32.4 L		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
White 45.....	4500	Own GR	5 x 6	32.4 L		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
Wileco F.....	4500	Bud	4 $\frac{1}{2}$ x 6	32.4 L		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
Witt Will A.....	4500	Cont B-5	4 $\frac{1}{2}$ x 6	36.1 L		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
5$\frac{1}{2}$, 6 and 7 Ton																			
Autocar L.....	4800	Own	4 $\frac{1}{2}$ x 6	32.4 L		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
Autocar M.....	4500	Own	4 $\frac{1}{2}$ x 6	32.4 L		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
Clinton 120S.....	4990	Buda BTU	5 x 6	36.1 L		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
Clydesdale 2.....	4990	Cont B-5	5 x 6	36.1 L		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
Garford 151 A-5.....	5750	Buda BTU	5 x 6	36.1 L		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
Gramm-Bernstein 50-60.....	4450	Cont	4 $\frac{1}{2}$ x 6	36.1 L		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
Hurlburt E.E. Kelly-Springfield K-61.....	4850	Buda ATU	4 $\frac{1}{2}$ x 6	36.1 L		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
Liedinghaus.....	5750	Wau EU	4 $\frac{1}{2}$ x 6	36.1 L		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
Mack AC81 $\frac{1}{2}$	4950	Buda BTU	5 x 6	36.1 L		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
Mack AC71 $\frac{1}{2}$	6000	Own AC	5 x 6	36.1 L		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
Master 64.....	6000	Buds ATU	4 $\frac{1}{2}$ x 6	36.1 L		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
Old Reliable.....	6000	Wau P	4 $\frac{1}{2}$ x 6	36.1 L		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
Peter Arrow RE-7 $\frac{1}{2}$	5200	Own	4 $\frac{1}{2}$ x 6	32.4 T		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
Pierce Arrow RE.....	5100	Own	4 $\frac{1}{2}$ x 6	32.4 T		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
Rainier R-27.....	5100	Cont B-5	4 $\frac{1}{2}$ x 6	36.1 L		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
Saurer 5 AD.....	4850	Buda YBU	4 $\frac{1}{2}$ x 6	36.1 L		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
Service 103.....	4850	Cont B-5	4 $\frac{1}{2}$ x 6	36.1 L		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
Standard 5-7.....	6500	Wau P	4 $\frac{1}{2}$ x 6	36.1 L		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
Sterling 7 $\frac{1}{2}$ -Chain U.S. T.....	5000	Buda ATU	4 $\frac{1}{2}$ x 6	36.1 L		Bos	Opt	Bos	Shel 610	I	Clark 3D	1/10	52	Jac	36.6	36x6	40x6	4.5	Mot
Gasoline Tractor-Trucks																			
Federal Light Duty.....	Cont K-4	4 $\frac{1}{2}$ x 5 $\frac{1}{2}$	32.4 L	27.2 L		Eis	Rm	B.B.	Tim 1630B	W	Tim 6560	8.5	50	15	Gem	36x4	36x5	4.5	5000
G.M.C. K-41T-5 Ton.....	Cont L-4	4 $\frac{1}{2}$ x 5 $\frac{1}{2}$	32.4 L	27.2 L		Eis	Rm	B.B.	Tim 1630B	W	Tim 6560	8.5	50	15	Gem	36x5	36x5	4.5	6700
G.M.C. K-71T-16 Ton.....	Cont K-4	4 $\frac{1}{2}$ x 6	32.4 L	27.2 L		Eis	Rm	B.B.	Tim 1630B	W	Tim 6560	8.5	50	15	Gem	36x5	36x5	4.5	5300
G.M.C. K-101T-16 Ton.....	Cont K-4	4 $\frac{1}{2}$ x 6	32.4 L	27.2 L		Eis	Rm	B.B.	Tim 1630B	W	Tim 6560	8.5	50	15	Gem	36x5	36x5	4.5	5300
Harvey WFT.....	3050	Buda ETU	4 $\frac{1}{2}$ x 5 $\frac{1}{2}$	28.9 L		Eis	McC	Eis	Shel D-370	W	Shel W-21	12	9.5	45.9	Ros	36x5	36x5	4.5	5000
International 62-3 Ton.....	4050	Own AB	4 $\frac{1}{2}$ x 5 $\frac{1}{2}$	32.4 L		Eis	McC	Eis	Shel D-370	W	Shel W-21	12	9.5	45.9	Ros	36x5	36x5	4.5	5000
Mack AB 5-Ton.....	3400	Own AB	4 $\frac{1}{2}$ x 5 $\frac{1}{2}$	32.4 L		Eis	McC	Eis	Shel D-370	W	Shel W-21	12	9.5	45.9	Ros	36x5	36x5	4.5	5000
Mack AC 7-Ton.....	4950	Own AC	4 $\frac{1}{2}$ x 5 $\frac{1}{2}$	32.4 L		Eis	McC	Eis	Shel D-370	W	Shel W-21	12	9.5	45.9	Ros	36x5	36x5	4.5	5000
Mack AC 10-Ton.....	5500	Own AC	5 x 6	36.1 L		Eis	McC	Eis	Shel D-370	W	Shel W-21	12	9.5	45.9	Ros	36x5	36x5	4.5	5000
Mack AC 13-Ton.....	5750	Own AC	5 x 6	36.1 L		Eis	McC	Eis	Shel D-370	W	Shel W-21	12	9.5	45.9	Ros	36x5	36x5	4.5	5000
Mack AC 16-Ton.....	6000	Own AC	5 x 6	36.1 L		Eis	McC	Eis	Shel D-370	W	Shel W-21	12	9.5	45.9	Ros	36x5	36x5	4.5	5000
Pierce Arrow XB.....	Own	4 $\frac{1}{2}$ x 6	32.4 T	25.6 T		Own	SP	SP	Shel D-370	W	Shel W-21	12	9.5	45.9	Ros	36x5	36x5	4.5	5000
Pierce Arrow WD.....	Own	4 $\frac{1}{2}$ x 6	32.4 T	25.6 T		Own	SP	SP	Shel D-370	W	Shel W-21	12	9.5	45.9	Ros	36x5	36x5	4.5	5000
Saurer F.R.....	6500	Own DU	4 $\frac{1}{2}$ x 6	32.4 T		Own	SP	SP	Shel D-370	W	Shel W-21	12	9.5	45.9	Ros	36x5	36x5	4.5	5000
Walter F.....	6500	Own DY	4 $\frac{1}{2}$ x 6	32.4 T		Own	SP	SP	Shel D-370	W	Shel W-21	12	9.5	45.9	Ros	36x5	36x5	4.5	5000
Walter F.R.....	6500	Own DY	4 $\frac{1}{2}$ x 6	32.4 T		Own	SP	SP	Shel D-370	W	Shel W-21	12	9.5	45.9	Ros	36x5	36x5	4.5	5000
Walter F.W.....	6500	Own DY	4 $\frac{1}{2}$ x 6	32.4 T		Own	SP	SP	Shel D-370	W	Shel W-21	12							

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ELECTRIC COMMERCIAL CARS

Name and Model Number	Total Weight Resting on Four Tires	Chassis Weight Exclusive of Battery	Minimum Load Capacity	Maximum Load Capacity	Chassis Price	Maximum Speed	Location of Battery	Mileage Per Charge	Motor	Controller	Speeds Forward	Drive	Rear Axle	Front Tires	Steering Gear	Wheelbase	Per Cent of Weight on Rear Wheels
Autocar E 1F	2800	2700	1000	1500	2400	14	A	55	G-E	G-E	Row	34x4	34x5	Ross	107	60	
Autocar E 2F	2800	2700	1000	1500	2400	14	A	60	G-E	G-E	Row	34x5	34x6	Ross	120	60	
Autocar E 2H	3200	3000	1000	1500	4000	14	A	65	G-E	G-E	Row	34x5	36x8	Ross	128	60	
Autocar E 4Y	4000	3800	1000	1500	4300	14	A	65	G-E	G-E	Row	34x6	36x6	Ross	133	60	
Autocar E 5M	4300	4000	1000	1500	4300	14	A	65	G-E	G-E	Row	36x7	36x7	Ross	138	60	
C-T D-1	5400	2200	1000	1500	5400	14	A	55	G-E	Own	Flot	36x3	36x3	W	100	60	
C-T B-1.5	6100	2300	1000	1500	6100	14	A	60	G-E	Own	Flot	36x3	36x4	W	91 1/2	65	
C-T D-1.5	6200	2300	1000	1500	6200	14	A	60	G-E	Own	Flot	36x3	36x4	W	116	71	
C-T B-2	7300	2400	1000	1500	7300	14	A	50	G-E	Own	Flot	36x3	36x5	W	101	68	
C-T D-2	7300	2400	1000	1500	7300	14	A	50	G-E	Own	Flot	36x3	36x5	W	124	70	
C-T B-4	11750	4000	1000	1500	11750	12	A	50	G-E	Own	Flot	36x4	36x4	W	116	68	
C-T C-6	14400	4300	1000	1500	14400	10	A	45	G-E	Own	Flot	36x4	36x4	W	122	70	
C-T C-7	16900	5000	1000	1500	16900	10	A	45	G-E	Own	Flot	36x5	36x5	W	126	65	
C-T A-7	17700	5800	1000	1500	17700	11	A	45	G-E	Own	Flot	36x6	36x4	W	122	60	
C-T A-10	22250	6500	1000	1500	22250	10	A	45	G-E	Own	Flot	36x7	36x5	W	132	59	
Kelland AT	5850	1950	1000	1500	5850	15	S	50	G-E	G-E	Flot	34x3	34x3	Ross	102	60	
Kelland BT	6950	2050	1500	2000	6950	15	S	50	G-E	G-E	Flot	34x3	34x3	Ross	102	60	
Kelland CT	7050	2150	2000	2500	7050	15	S	50	G-E	G-E	Flot	34x3	34x4	Ross	102	60	
Kelland AH	6400	2500	1000	1500	6400	15	A	45	G-E	G-E	D	36x3	36x3	Hin	106	60	
Kelland BH	7500	2600	1500	2000	7500	15	A	45	G-E	G-E	D	36x3	36x3	Hin	106	60	
Kelland CH	7600	2700	2000	2500	7600	15	A	45	G-E	G-E	D	36x3	36x4	Hin	106	60	
Kelland ATS	6100	2200	1000	1500	6100	15	H&S	50	G-E	G-E	Flot	34x3	34x3	Ross	102	60	
Kelland BTS	7200	2300	1500	2000	7200	15	H&S	50	G-E	G-E	Flot	34x3	34x3	Ross	102	60	
Kelland CTS	7300	2400	2000	2500	7300	15	H&S	50	G-E	G-E	Flot	34x3	34x3	Ross	114	60	
Lansden Century	1700	.....	1250	1600	1700	15	S	50	G-E	G-E	Flot	32x4	32x4	Lav	108	50
Lansden Century	1950	.....	2000	1850	1950	15	S	50	G-E	G-E	Flot	33x3	33x5	Lav	112	50
Lansden Marathon	2900	.....	2000	1850	2900	12	A	50	G-E	G-E	D	36x3	36x4	.....	108	60
Lansden Marathon	4400	.....	4000	2250	4400	11	A	50	G-E	G-E	D	36x4	36x3	.....	120	60
Lansden ME	5700	.....	7000	2950	5700	10	A	45	G-E	G-E	D	36x5	36x5	.....	133	60
Lansden MF	7500	.....	10000	3350	7500	9	A	40	G-E	G-E	D	36x6	36x6	.....	146	60
O. B. A.	2175	14	.....	.....	2175	16	H&S	52	Diehl	Own	Russ	32x4	32x4	Own	103	60
O. B. B.	2650	13	.....	.....	2650	16	H&S	55	Diehl	Own	Russ	33x5	33x5	Own	107	60
O. B. C.	3750	11	.....	.....	3750	15	.....	.....	G-E	G-E	Det	32x3	32x3	Ross	104	66
O. B. D.	3950	10	.....	.....	3950	10	.....	.....	G-E	G-E	Math	34x3	36x3	Ross	94	66
Steinmets 10.	2000	.....	.....	.....	2000	16	H&S	52	Diehl	Own	Math	34x3	36x3	Ross	101	66
Steinmets 15.	2300	.....	.....	.....	2300	16	H&S	55	Diehl	Own	Math	34x3	36x4	Ross	114	66
Walker 12.	1900	.....	1000	.....	1900	15	.....	.....	G-E	G-E	Math	34x3	36x4	Own	135	60
Walker 15.	2600	.....	1500	.....	2600	15	.....	.....	G-E	G-E	Math	36x5	36x6	Own	143	60
Walker 22.	2800	.....	2000	.....	2800	14	.....	.....	G-E	G-E	Math	36x4	36x4	Own	107	60
Walker 42.	3800	.....	4000	.....	3800	13	.....	.....	G-E	G-E	Math	36x4	36x5	Own	114	66
Walker P.	5600	.....	7000	.....	5600	11	.....	.....	G-E	G-E	Math	36x5	38x5	Ross	131	66
Walker N.	6400	.....	10000	.....	6400	10	.....	.....	G-E	G-E	Math	36x6	38x6	Ross	141	66
Walter HD	6800	2300	2000	2200	6800	16	A	60	Diehl	G-E	B	32x3	32x4	Ross	98	60	
Walter EN	13200	4400	5000	3100	13200	15	A	50	G-E	G-E	D	36x4	36x7	Gem	114	60	
Walter EL	16800	5000	7000	3700	16800	12	A	50	G-E	G-E	D	36x5	36x4	Gem	132	60	
Walter ES	23600	7200	11000	4500	23600	12	A	50	G-E	G-E	D	36x6	40x6	Ross	150	70	
Walter ER	28400	7500	15000	4800	28400	11	A	50	G-E	G-E	D	36x7	40x7	Ross	150	70	
Ward A211	4500	1650	550	1150	4500	15	S	75	G-E	Own	W	32x4	32x4	Own	88	56	
Ward B-222	6000	2300	800	1700	6000	14	S	84	G-E	Own	W	32x3	32x4	Own	91	62	
Ward C-211	8000	2670	1650	2850	8000	13	S	65	G-E	Own	W	32x3	34x5	Own	96	64	
Ward E-211	12000	3570	4500	5400	12000	12 1/2	S	56 1/2	G-E	Own	W	34x4	36x6	Own	108	65	
Ward E-111	12000	4170	4000	5000	12000	12 1/2	A	45	G-E	G-E	W	34x4	36x6	Own	108	65	
Ward G-111	16000	5200	5850	7050	16000	11	A	44	G-E	G-E	W	36x5	36x8	Own	120	68	
Ward J-111	22500	7350	8850	10500	22500	10	A	39 1/2	G-E	G-E	W	36x6	36x10	Own	132	70	
Ward M-111	31000	9600	13500	15750	31000	9	A	36	G-E	G-E	W	36x7	40x14	Own	146	71	

NOTE: Battery Equipment in all above makes is at the option of the purchaser. Battery Location Abbreviations: A—amidships; H—under hood; and S—under seat.

House Passes Bill to Reduce Automobile Excise Taxes

Washington, March 10.—Without a record vote but practically unanimously the House of Representatives decided to eliminate practically \$25,000,000 from the automotive excise tax burden which the motorists of the country have been carrying.

The vote was upon an amendment offered by Rep. McLaughlin, Republican, of Michigan, to the automotive section of the tax bill reported by the Ways and Means Committee. The amendment provides that:

1. Automobile trucks and automobile wagons or the chassis thereof selling for \$1000 or less, shall be exempt from the 3 per cent tax which the present statute imposes.

2. A tax will be levied hereafter only upon the amount in excess of \$1000 for which these vehicles sell. Only heavy duty trucks will be included, therefore, in the taxpaying category.

3. A reduction of 50 per cent in the tax now imposed on repair parts and accessories by cutting the rate from 5 per cent to 3 per cent.

No change was made in the tax of 5 per cent on passenger cars.

Removal of the truck tax will cost the Government about \$3,600,000 in revenue and the reduction in the parts tax about \$20,000,000.

The amendment was offered by Mr. McLaughlin at the request of Rep. Robert H. Clancy of Michigan who has led the fight in the House for a reduction in automotive taxes.

The victory is the most important of a political nature ever won by the automotive industry and the motorists of the country. Three weeks ago the fight seemed hopeless, but the campaign of education which was launched then resulted in such a flood of protests against the discriminatory excise levies on automotive products that Congress finally realized the worm had turned.

The battle in the House was merely

the first major engagement, however. The Senate must next be convinced that the automotive tax reductions should remain. After that the real contest will come in the conference committee which will compromise the individual measure passed by the two houses.

A strong tactical advantage has been given by the action of the House, however, and there is every reason to believe that the Senate will not resist seriously acceptance of the automotive sections in the House bill.

Even if the compromise measure agreed upon by committees representing both branches of Congress is finally passed and goes to the President, it remains to be seen whether he will sign it, inasmuch as it will only remotely resemble the original Mellon plan. There is every reason to believe, however, that unless it is a greater monstrosity than now seems probable, Mr. Coolidge will not place himself, on the eve of a presidential campaign, in the position of refusing tax relief to the country even though it may not be as scientific as he desires.

DETAILED MOTOR

These Tables Consist Only of Specifications Received Directly From the Manufacturer. Every Commercial Chassis or Those Recom

Line Number	TRADE NAME AND NUMBER	UNLOADED WEIGHT (In Pounds)			GENERAL DIMENSIONS							ENGINE DETAILS							NORMAL SPEED M.P.H.					
		Capacity Seats	Chassis Price	Chassis Only	Chassis and Body	Recommended Body Weight	Wheelbase	Tread, Front	Tread, Rear	Floor Height	Turning Radius	Over-All Length	Over-All Width	Clearance from Ground	Make and Model Number	Bore and Stroke	Horsepower	Valve Arrang'mt	Fuel Feed	Lubrication	Carburetor (Make)	Radiator (Make)	Ignition System	Line Number
1	Acme K.	30	6900	9900	3000	200	58½	74	27	38	312	90	5	Cont 6B	3½ x 5	33.7	L	V F	Zen	Own	Eis	30	5.7	
2	Bethlehem KN	16	1695	2650	800	125	56	56	...	26	175	64½	10	Own	3½ x 5	19.6	L	V F	Zen	GO	Bos	35	...	
3	Bethlehem GN	25	2495	4100	1200	138	56	57½	...	25	208½	66½	9	Own	4 x 5½	25.6	L	V F	Zen	GO	Bos	25	...	
4	Bethlehem HN	35	3295	5250	1500	145	56	56	...	26	226½	70	10	Own	4 x 5½	25.6	L	V F	Zen	GO	Bos	25	...	
5	Brinton	25	3400	...	Op	58	58	36	30	Op	...	12	10	Cont	4½ x 5½	32.4	L	G F	Strm	Chic	Bos	25	...	
6	Brockway	25	...	6400	9280	2880	185	66½	71	27½	31½	295½	84	10	Cont 6B	3½ x 5	33.7	L	V F	Zen	GO	Bos	25	5
7	Brockway	30	...	6400	9580	3180	197	66½	71	27½	31½	324½	84	10	Cont 6B	3½ x 5	33.7	L	V F	Zen	GO	Bos	25	5
8	Clinton	30	4075	5925	8700	2775	184	58½	58½	30	37	270	75½	9½	Buda EBU	4 x 5½	28.9	L	V F	Zen	Own	Bos	30	3
9	Commerce 25	24	...	5400	9400	4000	198	56	56	33½	35	250	9	9	Cont 6B	3½ x 5	33.7	L	V F	Zen	Lng	Bos	35	7
10	Commerce 14	17	4200	7300	7300	189	56	56	30	27	228	81	9	Cont 6B	3½ x 5	33.7	L	V F	Zen	Lng	Bos	35	7	
11	Commerce 20	14	4300	7300	7300	189	56	56	30	27	231	74	9	Cont 6B	3½ x 5	33.7	L	V F	Zen	Lng	Bos	35	7	
12	Day-Elder 20	20	5200	...	2500	168	56	58	32	30	237	70½	11	Cont K4	4 x 5½	27.2	L	V F	Zen	Bus	Eis	35	10	
13	Day-Elder 25	25	5600	...	3000	180	58	58½	32	30	260	75½	11	Buda EBU	4 x 5½	28.9	L	V F	Zen	Bus	Eis	35	7	
14	Day-Elder 30	30	6000	...	3500	192	68½	74	25	27	271½	90	8	Cont 6T	3½ x 5½	31.5	L	V F	Zen	Bus	Eis	35	7	
15	Defiance GL-3	19	3200	4700	1200	140	56	56	28	21	210	84	8	Cont 8 R	3½ x 5	27.3	L	V F	Zen	Chic	Bos	30	5	
16	Denby 216	30	6860	...	216	70	70	72	73	287	82	9½	Cont 6B	3½ x 5	33.7	L	V F	Zen	Lng	Bos	47	9		
17	Fageol Inter City	22	...	8700	...	218	70	70	21	38	306	84	7½	HS 50	4 x 5½	28.9	H	V F	Zen	Lng	Del	35	6	
18	Fageol Street Car	29	9600	...	218	70	76½	20	38	312	89	7½	HS 50	4 x 5½	28.9	H	V F	Zen	Lng	Del	30	7		
19	Federal	18	4200	...	1800	160	56	59½	28	28	245	...	10	Cont 6M	3½ x 4½	27.3	L	V F	Zen	Mod	Eis	35	6	
20	Federal	25	5450	...	2500	190	60	60	30	28	266½	10	10	Cont 6B	3½ x 5	33.7	L	V F	Zen	Own	Eis	30	7.5	
21	Fifth Avenue J.	29	5660	8235	2575	172	67½	71½	32	29½	277	87½	7	Yellow	4 x 6	25.6	S	V F	Zen	Hol	Own	30	3	
22	Ford	...	...	...	...	123	56	56	20	...	...	...	...	...	3½ x 4	22.5	L	G S	Strm	Own	Spk	35	5
23	Garford 51D	29	4350	6500	9900	3400	187	65	75½	28½	30	295	91	7	Buda YBU	4 x 5½	32.4	L	V F	Strm	Own	...	22	...
24	Garford 726	25	3750	4800	7800	3000	168	56	65½	32	30	236	78½	7½	Buda EBU	4 x 5½	28.9	L	V F	Strm	Own	...	23	...
25	Graham CA.	16	1325	2910	4800	1800	140	56	56	34	26½	247	77	7½	Dodge	3½ x 4½	24.1	L	V F	Strm	McC	NE	30	5
26	Guilder #30	30	4500	5600	8800	3000	191	64	70	26	70	300	83	11	Own 30	4 x 5½	23.1	L	V F	Strm	McC	Eis	23	6
27	Indiana 20	22	5300	8900	3600	174	60	68	35	29	252½	89½	9½	Own 38	4 x 5½	27.2	L	V F	Strm	McC	Eis	23	6	
28	Indiana 25	26	5850	9950	4100	192	60	68	35	32	279½	89½	9½	Own 38	4 x 5½	27.2	L	V F	Strm	...	...	27 W	...
29	International S.	14	2750	3500	750	124	56	56	20	Lyco KB	3½ x 5	19.6	L	G FS	En	Con	...	25	...
30	Jumbo	25	6000	8500	2800	204	60	72	27	...	260	84	8	Buda EBU	4 x 5½	28.9	L	V F	Zen	GO	Eis	25	8	
31	Kissel	18	5200	7780	2400	202	64½	66	24	...	252	76	8	Own 4-36	4 x 5½	28.9	L	V F	Zen	Spar	Bos	40	30 Ex	
32	Larrabee X 2	14	3350	4750	...	155	56	56	29	28	216	70	11	Cont 8R	3½ x 4½	27.3	L	V F	Zen	Fed	Bos	30	3	
33	Larrabee XJ2	21	4300	6100	...	168	56	57	31	36	250	90	9	Cont 8R	3½ x 4½	33.7	L	V F	Zen	Fed	Bos	35	2	
34	Larrabee XH3	21	4600	6700	...	186	62	62	26	34	250	90	9	Cont 6B	3½ x 5	33.7	L	V F	Zen	Brm	Spl	20	3	
35	Luedinghaus	4400	5600	1200	170	58	58	44	...	...	...	...	11½	...	...	...	...	...	...	...	...	...	...
36	Mack AB.	25	4435	6075	3000	195	58½	60½	25½	37½	300	88	6½	Own	4 x 5½	28.9	L	G S	Zen	Sheb	...	35 Ex	...	
37	Mason	21	1395	3100	5400	2300	150	56	56	30	246	85	10	Her O	4 x 5	25.6	L	G FS	Zen	Fed	AuL	35	12	
38	Master DDB.	30	6000	9500	3500	194	59	59	26	33½	Buda EBU	4 x 5½	28.9	L	V F	Zen	Chic	Eis	25	5
39	Menominee DE	26	5900	9100	3200	186	68	73	26	30	256	86	10	Wis TAU	4 x 6	25.6	L	V F	Zen	Own	...	32	6	
40	Moreland RC	16	2280	3850	5850	2000	180	56	57½	23½	...	...	7	Her O	4 x 5	25.6	L	V F	Zen	Own	Spk	25	...
41	Moreland EC	20	3780	4590	7590	3000	178	61	58	24½	...	...	8½	Cont K4	4 x 5½	27.3	L	V F	Strm	Own	...	25	...
42	Moreland AC	25	4700	5660	9160	3500	187	68	68	25½	...	...	9	Cont L4	4 x 5½	32.5	L	V F	Strm	...	...	25	...
43	Parker B 23	16	1400	2700	4600	1900	131	58	58	30	21	204	66	10	Buda WTU	3½ x 5½	22.5	L	V F	Zen	Wes	35	9	
44	Parker E 24 B.	18	2500	3600	5800	2200	150	58	58	28	218	66	10	Wis SU	4 x 5	25.6	H	V F	Strm	Own	Wes	40	10	
45	Perfection CB.	24	4400	5800	8900	3000	227	68½	74½	25	39	275	87	11	Cont 6B	3½ x 5	33.7	L	V F	Zen	Mod	Eis	35	6
46	Phila. Motor Coach P	65	6500	8750	14650	5900	216	72	75	20½	25	333½	90	8½	Own 6 cyl.	4 x 6	38.4	H	V F	Zen	GO	NE	25	5
47	Pierce Arrow Z.	25	4600	6000	...	196	68	75½	28	37½	282	89½	8	Own	4 x 5½	38	T	P F	Strm	...	Del	50	3	
48	Pierce Arrow Z.	30	4750	6400	...	220	68	75	28	40	303	89½	8	Own F	4 x 5½	38	T	P F	Strm	...	Del	50	3	
49	Reo F.	1185	2705	3360	650	128	56	56	34	22½	190	66	10½	Her O	4 x 5	25.6	L	V F	Strm	John	Own	NE	45	7
50	Ruggles Chanticleer.	16	3000	5000	...	150	56	56	28	27	206	73	10½	Cont L4	4 x 5½	32.4	L	V F	Zen	Lng	Eis	25	2.27	
51	Selden	16	7200	10200	3000	195	68	74	29½	33	309	91	7	Cont 6B	3½ x 5	33.8	L	V F	Zen	Lng	Eis	25	2.27	
52	Selden	16	7200	10200	3000	195	68	74	29½	33	309	91	7	Wau Y	4 x 5½	25.6	L	V F	Zen	Lng	Eis	25	2.27	
53	Service 61B.	30	5850	...	192	58	66	30	24															

BUS SPECIFICATIONS

Car Manufacturer in the Country Was Solicited and the Jobs Listed Are Either Specially Designed Bus
mended for This Service

Line Number	ELECTRICAL EQUIPMENT				TRANSMISSION				FRONT AXLE		REAR AXLE		TIRES, WHEELS, RIMS											
	Battery (Make)	Model No.	Volts and Amp. Hr.	Starter (Make)	Generator (Make)	Clutch (Make)	Make and Model Number of Gearset	Location	Speeds	Universal (Make)	Springs (Make)	Brakes (See Note)	Make and Model Number	Final Drive	Make and Model Number	Type	*Pneumatic	Dual Pneumatic	Solid					
																	Front	Rear	Wheels (Make)	Rim Equipment				
5.7	Wil	SJRT4	6-111	Del	Rm	B.B.	Cott RU	U	4	Bld	Det	A	1540 B	W	6511 S	F	6.8	35.36	Ros	36x6*	36x6†	Bud	Fir	
5	2 POL	613SHC	6-111	GD	GD	B.B.	Det	U	3	Spic	Math	A	Eat 750	S	Eat 1000	F	6.86	21.3	Lav	35x5	35x5	....	Fir
5	3 POL	613 SHC	6-111	GD	GD	B.B.	Det	U	4	UP	Math	A	Shel 33FA500	R	Wis 66A	F	7.75	24.8	Lav	34x4	34x6	....	Fir
5	4 POL	613SHC	6-111	GD	GD	Full	Full	U	4	UP	Math	A	Shel D 343	R	Wis 88E	F	8.67	41.56	Lav	36x4	36x8	Smi	Fir	
5	Exi	.....	.....	Del	.....	B-Li	B-Li 50	U	4	Spic	Phil	A	Tim 610 B	I	Clark 3DS	D	7.	37.45	Gem	.....	.....	Bud	Fir
5	Exi	.....	12	LN	LN	B-Li	B-Li 55	A	4	M-E	Mer	B	Shul 610B	I	Clark 3DS	D	7.	37.45	Gem	.....	.....	Bud	Fir
7	7 Exi	611SHC	6-90	Bos	Bos	B-Li	B-Li 55	A	4	M-E	Mer	B	Tim 1544 B	W	Tim 6560	F	6.5	34.8	Ros	32x6*	32x6†	Bud	Fir	
7	9 Wil	SJRT6	6	Bos	Bos	B-Li	B-Li 51	A	4	M-E	Per	A	Tim 1520	W	Tim 6460	F	6.8	36.4	Ros	36x6	40x8	Bim	Fir	
7	10 Wil	SJRT6	6	Bos	Bos	B-Li	B-Li 35	A	4	UM	Am	A	Tim 1452	W	Tim 6460	F	6	20.2	Ros	32x6	32x6	....	Fir
7	11 Wil	SJRT6	6	Bos	Bos	B-Li	B-Li 35	A	4	UM	Am	A	Tim 1452	W	Tim 6460	F	6	20.2	Ros	32x6	32x6	....	Fir
7	12 Wil	SJRT 6	6-153	Bos	Bos	B-Li	B-Li 35	A	3	Spic	Shel	A	Col 7018	W	Tim 6460	F	6	20.2	Gem	36x6*	38x7*	....	Fir
7	13 Wil	SJRT 6	6-153	Bos	Bos	B-Li	B-Li 51	A	4	Spic	Shel	A	Col 8513	W	Tim 6560	F	6.8	36.4	Gem	36x6*	40x8*	....	Fir
5	14 Wil	SJRT 6	6-153	Bos	Bos	B-Li	B-Li 51	A	4	Spic	Shel	A	Shul 610	W	Tim 6511S	F	6.8	36.4	Gem	36x6*	36x6*	....	Fir
9	15 Wil	SJRT 4	6	Bos	Bos	Full	Full SU 2	U	3	Spic	Det	A	Col 7000	B	Eat 1000	F	6.14	.....	Lav	32x6*	34x7*	StM	Fir
6	16 Wil	.....	6-200	Bos	Bos	B-Li	B-Li 35	A	4	UP	Det	A	Shul	I	Clark	D	.....	.....	Ros	36x6*	36x6†	Bud	Fir
7	17 Exi	.....	.....	Del	.....	B-Li	B-Li 50	A	4	Spic	Math	A	Tim 1524	W	Tim Spec	F	4.6	19.7	Ros	36x6*	38x7	Bud	....
7	18 Exi	.....	.....	Del	.....	B-Li	B-Li 50	A	4	Spic	Math	A	Tim 1524	W	Tim Spec	F	4.6	19.7	Ros	36x6*	36x6†	Bud	....
7	19 Exi	3LXRE-25	6-185	Rm	Rm	B-B.	Own	A	4	Sn-Pe	Math	A	Own	W	Tim 6460	F	6.5	32.5	Gem	30x5*	34x7*	Smi	Fir	
7	20 Exi	3LXRE-25	6-185	Rm	Rm	B-B.	Det R 400	A	4	Sn-Pe	Math	A	Own	W	Tim 6560	F	6.75	39.8	Gem	32x6*	36x8*	Smi	Fir	
5	21 Wil	STRN27	12-90	....	NE	Own	Own	A	4	Sned	Math	A	Tim 1523	W	Tim 6412	F	5.4	21.6	Ros	34x5	34x7	Own	....
5	22 Own	.....	6-80	Own	Own	Own	Own	U	3	SS	Shul	I	Torb	D	6.3	21.6	CAS	32x4 1/2*	32x4 1/2*	....	....	
5	23 Wil	STRN 6	6-190	AtK	Rm	Own	Own	A	4	Spic	Per	A	Tim 1550	W	6511 G	F	5.4	.....	Own	36x6*	36x6†	Day	Opt
5	24 Wil	STRN 6	6-190	AtK	Rm	Own	Own	A	4	Spic	Per	A	Dod	.....	Tim 6560	F	5.4	.....	Ros	32x6*	32x6†	Bud	Fir
5	25 Exi	9318	12-50	NE	NE	Dod	Dod	.....	3	UP	Det	A	B	Own B-360	W	6.29	29.29	Dod	33x4 1/2*	36x6*	StM	Fir	
5	26 Wil	SJRT28	12-104	LN	LN	B-Li	B-Li 51	N	4	ME	Mer	A	Shul 5550B	W	Wis	.....	5.83	.....	Ros	36x6	36x6†	....	....
5	27 Wil	STRN 6	6-157	Wes	Rm	B-B.	B-Li	A	4	Sn-Sp	Shel	A	Shel D 370	W	Shel W 103	F	6.05	25.5	Ros	36x6*	36x6†	Bud	Fir	
5	28 Wil	STRN 6	6-157	Wes	Rm	B-B.	B-Li	A	4	Sn-Sp	Shel	A	Shel D 370	W	Shel W 21	F	6.05	25.5	Woh	36x6*	36x6†	Bud	Fir	
5	29 POL	613RHN	6-100	AuL	Mun	Mun	Mun	U	3	SS	Shul	I	Shul 610S	I	Clark	.....	8	33	Jac	36x6*	36x6†	Ind	Fir
5	30 Exi	.....	6-120	NE	NE	Full	B-Li	A	4	Spic	Math	B	Shul 610	R	Wis 60B	.....	5.8	19.08	Ros	34x7*	34x7*	Whit	Gdy
5	31 Wil	SJRT 6	6-153	Rm	B-Li	B-Li 35	U	4	Spic	Math	A	Sals	Shel	W	Walk 25 A	F	7.66	37	Ros	36x6	40x8	StM	Fir
5	32 Exi	3XE-D	6	Bos	Bos	B-Li	B-Li 30	U	3	Sned	Shel	A	Tim 1550	W	Wis 120 K	F	6.9	25	Ros	36x6*	34x5*	Ind	Fir	
5	33 Exi	3XE-D	6	Bos	Bos	B-Li	B-Li 30	U	3	Spic	Shel	A	Tim 1550	B	Tim 512	F	5.22	.....	Ros	36x6*	34x5*	....	....
5	34 Exi	3XED	6	Bos	Bos	B-Li	B-Li 31	U	3	Spic	Shel	A	Shul	W	Shel W 21	F	5.29	.....	Ros	32x6	32x6†	Bud	Fir
5	35 Exi	.....	6-150	Dy	Dy	B-B.	Det	U	4	Spic	Tut	A	Shul 510	R	Wia	.....	Opt	46	Lav	36x6*	40x8*	Bim	Fir
5	36 Exi	6LXRE13	12-120	LN	LN	Own	Own	U	4	Spic	Mer	B	Own	R	Own	F	5.88	19.3	Own	32x6*	32x6*	Bud	Fir	
5	37 USL	.....	6-120	AuL	B-B.	W.C.	W.C.	A	3	Spic	Arm	A	Fli	F	Fli	.....	.....	.....	Lav	33x5*	33x5†	Bud	Fir
5	38 Wil	.....	12	Wes	Wes	Full	Full GU 7	U	4	Spic	Det	B	Shul 610	R	Walk 25 A	F	7.66	37	Ros	36x6	40x8	StM	Fir
5	39 Wil	SJRT4	6-125	Bos	Bos	Det	Cott AU	U	4	Spic	Tut	A	Tim 1550	W	Wis 120 K	F	6.16	32.06	Ros	36x6†	36x6†	Ind	Fir	
5	40 Hob	6HTXR15A	6-140	AuL	.....	B-Li	B-Li 30	U	3	Pet	US	A	Tim 1250	B	Tim 512	F	5.5	22	Ros	32x6	32x6	Own	Gdy
5	41 Hob	6HTXR15A	6-140	Opt	.....	B-Li	B-Li 51	U	4	Pet	US	A	Tim 1550	W	Tim 6410	F	6	32.1	Ros	34x5*	34x5†	Bud	....
5	42 Hob	6HTXR15A	6-140	Opt	.....	B-Li	B-Li 51	U	4	Pet	US	A	Tim 1550	W	Tim 6511	F	6	32.1	Ros	36x6*	36x6†	Bud	....
5	43 Gl	611	6-80	Wes	Wes	Full	Full SU 2	U	3	.....	Tut	A	Fli 72BA80	B	Fli 72BA10	F	5.5	22	Lav	32x6*	32x6*	Whit	Fir
5	44 Gl	611	6-80	Wes	Wes	Full	Full SU 2	U	3	.....	Tut	A	Cont 600	B	Fli 72BA10	F	4.9	20	Lav	32x6*	32x6*	Whit	Fir
5	45 Exi	.....	6-185	Rm	BB	Cott RV	U	4	Spic	SS	A	Cont 650	R	Huck 85	F	5.3	28	Ros	36x6*	34x6†	Ind	Fir	
5	46 Exi	6MVE13	12180	NE	NE	B-Li	B-Li 60	A	4	Spic	Shel	A	Shul 650B	I	At L C-IR	D	7.	32	Ros	36x6*	34x6*	....	....
5	47 Wil	.....	.....	Del	Wes	Own	Own	.....	4	Spic	.....	.....	W	.....	.....	.....	6	32	Ros	36x6	32x6†	Bud	....
5	48 Wil	.....	.....	Del	Wes	Own	Own	.....	4	Spic	.....	.....	W	.....	.....	.....	6	32	Ros	36x6	32x6†	....	....
5	49 Wil	SJRN4	6-111	NE	NE	Own	Own	.....	3	Own	Pen	A	Own	S	Own	.....	4.7	17.29	Own	33x5*	33x5*	Mot	Fir
5	50 POL	613RHN	6-100	Rm	B-Li	B-Li 30	U	3	Spic	Det	A	Col 5000	B	Col 52000	F	5.13	21	Jac	30x5*	32x6	Nor	Fir		
5	51 POL	615 KPN	6-200	NE	NE	B-Li	B-Li 30	A	4	Spic	SS	A	Tim	W	Tim	F	7.75	31	Jac	36x5	36x5	Arc	Fir	
5	52 POL	615 KPN	12-300	NE	NE	B-Li	B-Li 51	A	4	Spic	SS	A	Tim	W	Tim	F	7.75	31	Gem	36x5	36x5	Opt	Fir	
5	53 Wil	SJRT 6	6-166	Rm	Rm	B-B.	B-Li 51	U	4	Opt	Shel	A	Tim 1544	W	Tim 6560	F	6.75	36.12	Ros	32x6*	32x6†	Opt	Fir	
5	54 Wil	SJRT 4	6-120	Rm	Rm	B-Li	B-Li 35	U	4	M-E	Shel	A	Shul 312	B	Eat 1500	F	6.14	20.2	Ros	30x5	32x6	Opt	Fir	
5	55 Gl	ASLR632	6-132	Bos</td																				

Manufacturers and Models Included in Specifications on Preceding Pages

Also Manufacturers of Busses as Listed in the Bus Table

Truck Manufacturers Who Distribute Nationally

Note: This grouping of the manufacturers has been made from the best information at hand. Manufacturers are invited to furnish us with further information in relation to their distribution which will enable us to make this grouping as correct as possible.

Acme—1, 2, 3, 3½, 4½, 6½—Acme Motor Truck Co., Cadillac, Mich.
American-LaFrance—¾, 2½, 3½, 5—American-LaFrance Fire Engine Co., Inc., Elmira, N. Y.
Armleder—1, 1½, 2½, 3½—O. Armleder Motor Truck Co., Cincinnati, Ohio.
Atterbury—1½, 2½, 3½, 5—Atterbury Motor Car Co., Buffalo, N. Y.
Autocar—1, 1½, 2, 2½, 3, 4, 5 to 7—Autocar Co., Ardmore, Pa.
Bessemer—1, 1½, 2½, 4—Bessemer Motor Truck Co., Grove City, Pa.
Bethlehem—1, 2, 3—Bethlehem Motors Corp., Allentown, Pa.
Brockway—¾, 1½, 2½, 3½, 5—Brockway Motor Truck Co., Cortland, N. Y.
C. T.—1, 1½, 2, 3½, 5—Commercial Truck Co., Philadelphia, Pa.
Chevrolet—½, 1—Chevrolet Motor Truck Co. of Mich., Flint, Mich.
Clydesdale—1½, 2½, 3½, 5, 7—Clydesdale Motor Truck Co., Clyde, Ohio.
Commerce—¾, 1½, 2½—Commerce Motor Truck Co., Ypsilanti, Mich.
Day-Elder—1, 1½, 2, 2½, 3½, 5—Day-Elder Motors Corp., Newark, N. J.
Defiance—1½, 2, 3—Defiance Motor Truck Co., Defiance, Ohio.
Diamond T—¾, 1½, 1½, 2½, 3½, 5—Diamond T Motor Car Co., Chicago, Ill.
Dodge—¾—Dodge Bros., Detroit, Mich.
Duplex—1, 1½, 2, 3½—Duplex Truck Co., Lansing, Mich.
F. W. D.—¾—Four-Wheel Drive Auto Co., Clintonville, Wis.
Fageol—2, 3, 4—Fageol Motors Co., Oakland, Cal.
Federal—¾, 1, 1½, 2, 3½, 5, T.T.—Federal Motor Truck Co., Detroit, Mich.
Fifth Avenue—Fifth Avenue Coach Co., New York City.
Ford—1—Ford Motor Co., Highland Park, Mich.
G. M. C.—1, 2, 3½, 5—General Motors Truck Co., Pontiac, Mich.
Garford—1, 1½, 2½, 4, 5, 7½—Garford Motor Truck Co., Lima, Ohio.
Gary—1, 2, 2½, 3½, 5—Gary Motor Corp., Gary, Ind.
Graham—1, 1½—Graham Brothers, Evansville, Ind.
Gramm-Bernstein—1, 1½, 1½, 2, 2½, 3½, 4, 5—Gramm-Bernstein Motor Truck Co., Lima, Ohio.
Gray—¾—Gray Motor Corp., Detroit, Mich.
Indiana—1, 1½, 2, 2½, 3½, 5—Indiana Truck Corp., Marion, Ind.
International—¾, 1, 1½, 2, 2½, 3, 5—International Harvester Co. of America, Chicago, Ill.
Kelland—½, ¾, 1—Kelland Motor Car Co., Newark, N. J.
Kelly-Springfield—1½, 2½, 3½, 6—Kelly-Springfield Motor Truck Co., Springfield, Ohio.
Kissel—1, 1½, 2½, 4—Kissel Motor Car Co., Hartford, Wis.
Krebs—1, 1½, 2½, 3½—Krebs Motor Truck Co., Bellevue, Ohio.
Lansden—1, 2, 3½, 5, 6—Lansden Company, Danbury, Conn.
Larrabee-Deyo—1, 1½, 2½, 3½—Larrabee-Deyo Motor Truck Co., Inc., Binghamton, N. Y.
Maccar—1½, 2, 3, 4, 5—Maccar Truck Co., Scranton, Pa.
Mack—1½, 2, 2½, 3½, 5, 6½, 7½, T.T.—Mack Motors, Inc., New York, N. Y.
Mason Road King—1½—Durant Motors, Inc., Long Island City, N. Y.
Maxwell—1½—Maxwell Motor Co., Inc., Detroit, Mich.
Menominee—1, 1½, 1½, 2, 3½, 5—Menominee Motor Truck Co., Clintonville, Wis.
Nash—1, 2—Nash Motors Co., Kenosha, Wis.
Northway—2, 3½—Northway Motors Corp., Natick, Mass.
O. B.—1, 2, 3, 5—O. B. Electric Vehicles, Inc., Long Island City, N. Y.
Oshkosh—2, 2½—Oshkosh Motor Truck Mfg. Co., Oshkosh, Wis.
Overland—½—Willys-Overland Co., Toledo, Ohio.
Patriot—1, 2, 3—Patriot Mfg. Co., Havelock, Neb.
Penn—1, 2—Penn Motors Corp., Philadelphia, Pa.
Pierce-Arrow—2, 3, 4, 5, 6, 7½, T.T.—Pierce-Arrow Motor Car Co., Buffalo, N. Y.
Reo—1—Reo Motor Car Co., Lansing, Mich.
Republic—1½, 2, 3, 4—Republic Motor Truck Co., Inc., Alma, Mich.
Rowe—2, 2½, 3, 4, 5—Rowe Motor Mfg. Co., Lancaster, Pa.
Ruggles—¾, 1½, 2, 2½—Ruggles Motor Truck Co., Saginaw, Mich.
Schacht—1½, 2, 3, 4, 5—G. A. Schacht Motor Truck Co., Cincinnati, Ohio.
Selden—1½, 2½, 3½, 5—Selden Truck Corp., Rochester, N. Y.
Service—1½, 1½, 3, 3½, 4—Service Motor Truck Co., Wabash, Ind.
Signal—1, 1½, 2½, 3½, 5—Signal Truck Corp., Detroit, Mich.
Standard—1½, 1½, 2½, 3½, 5—Standard Motor Truck Co., Detroit, Mich.
Sterling—1½, 2, 2½, 3½, 5, 7½—Sterling Motor Truck Co., Milwaukee, Wis.
Stewart—1, 1½, 1½, 2½, 3½—Stewart Motor Corp., Buffalo, N. Y.
Transport—1, 1½, 2, 3½, 5—Transport Truck Co., Mt. Pleasant, Mich.
Traylor—1½, 2, 3, 5—Traylor Eng. & Mfg. Co., Cornwells, Pa.
United—1, 1½, 2½, 3, 3½—United Motor Products Co., Grand Rapids, Mich.
Walker—1, 2, 3½, 5—Walker Vehicle Co., Chicago, Ill.
Ward—750 lb. to 7 Ton—Ward Motor Vehicle Co., Mt. Vernon, N. Y.
White—¾, 2, 3½, 5—White Co., Cleveland, Ohio.
Yellow Cab—¾, 1½—Yellow Cab Mfg. Co., Chicago, Ill.

Truck Manufacturers Who Distribute Locally

Acason—2, 3, 4, 5—The Acason Corp., Detroit, Mich.
Ace—1½, 3—American Motor Truck Co., Newark, Ohio (receiver).
American—2½, 4, 5—American Motor Truck & Tractor Co., Portland, Conn.
Available—1½, 2, 2½, 3½, 5—Available Truck Co., Chicago, Ill.
Betz—1, 2½—Betz Motor Truck Co., Hammond, Ind.
Brinton—1½, 2½—Brinton Motor Truck Co., Philadelphia, Pa.
Buffalo—2, 3—Buffalo Truck and Tractor Corp., Clarence, N. Y. (receiver).
Casco—1—Casco Motors, Inc., Sanford, Me.
Chicago—1½, 2½, 3½, 5—Chicago Motor Truck, Inc., Chicago, Ill.
Clinton—1½, 2, 3, 4, 5 to 7—Clinton Motors Corp., Reading, Pa.
Columbia—1½, 2½, 3—Columbia Motor Truck Co., Pontiac, Mich.
Concord—1, 2, 2½, 3—Abbott-Downing Truck & Body Co., Concord, N. H.
Corbitt—¾, 1, 1½, 2, 2½, 3, 4, 5—Corbitt Motor Truck Co., Henderson, N. C.
De Martini—1½, 2, 3, 4—De Martini Motor Truck Co., San Francisco, Cal.
Dependable—1½, 2, 2½, 3, 3½—Dependable Truck & Tractor Co., East St. Louis, Ill.
Diehl—1, 1½—Diehl Motor Truck Works, Philadelphia, Pa.
Dixon—1½, 2, 2½, 3½—Dixon Motor Truck Co., Altoona, Pa.
D-Olt—1, 1½, 2, 2½, 5—D-Olt Motor Truck Co., Inc., Long Island City, N. Y.
Dorris—1, 2, 3½—Dorris Motor Car Co., St. Louis, Mo.
Eagle—1½, 2—Eagle Motor Truck Corp., St. Louis, Mo.
Fulton—1—Fulton Motors Corp., Farmingdale, N. Y.
G. W. W.—1½, 2—Wilson Truck Mfg. Co., Henderson, Iowa.
Gotfredson—1, 1½, 2½, 4, 5—Gotfredson Truck Corp., Ltd., Walker-ville, Ont.
Grass Premier—1, 1½, 2, 2½, 3½—Grass Premier Truck Co., Sauk City, Wis.
Guilder—1½, 2, 3—Guilder Engineering Co., Poughkeepsie, N. Y.
Harvey—2, 2½, 3½, 6, 10—Harvey Motor Truck Co., Harvey, Ill.
Hawkeye—1, 1½, 2, 3½—Hawkeye Truck Co., Sioux City, Iowa.
Hug—1½, 2—The Hug Co., Highland, Ill.
Hurlburt—1½, 2½, 3½, 5, 7—Harrisburg Mfg. & Boiler Co., Harrisburg, Pa.
Independent—1, 1½, 2½—Independent Motor Truck Co., Inc., Davenport, Ia.
Jumbo—1½, 2, 2½, 3, 3½, 5—Nelson Brothers Co., Saginaw, Mich.
Kalamazoo—Kalamazoo Motor Corp., Kalamazoo, Mich.
Kankakee—2½—Kankakee Motor Truck Co., Kankakee, Ill.
Kearns—1, 1½, 2, 3½, 5—Kearns-Dughie Motors Co., Danville, Pa.
Kenworth—1½, 2½, 3½—Kenworth Motor Truck Corp., Seattle, Wash.
Kimball—2, 2½, 4, 5—Kimball Motors Corp., Los Angeles, Cal.
King Zeitzer—1, 1½, 2½, 3½, 5—King Zeitzer Co., Chicago, Ill.
Kleiber—1½, 2½, 3½, 5—Kleiber Motor Truck Co., San Francisco, Cal.
Lange—2½, 3½—Lange Motor Truck Co., Pittsburgh, Pa.
Luedinghaus—1, 1½, 2, 3½, 5, 7—Luedinghaus-Espenschied Wagon Co., St. Louis, Mo.
Master—1½, 1½, 2½, 3½, 5, 5½—Master Motors Corp., Chicago, Ill.
Moreland—1, 1½, 2, 3, 5—Moreland Motor Truck Co., Burbank, Cal.
National—1, 1½, 2½, 3½, 5—National Steel Car Corp., Ltd., Hamilton, Ont., Canada.
Nelson-LeMoon—1, 1½, 2½, 3½, 5—Nelson & LeMoon, Chicago, Ill.
Netco—2, 2½, 3—New England Truck Co., Fitchburg, Mass.
Noble—1, 1½, 2, 2½, 3½—Noble Motor Truck Co., Kendallville, Ind.
Ogden—1, 1½, 2½, 3½, 5—Ogden Truck Co., Chicago, Ill.
Old Reliable—2½, 3½, 5, 6—Old Reliable Motor Truck Co., Chicago, Ill.
Olympic—2½—Olympic Motor Truck Co., Tacoma, Wash.
Oneida—2, 2½, 3½, 5—Oneida Motor Truck Co., Green Bay, Wis.
Parker—1, 1½, 3, 3½, 5—Parker Motor Truck Co., Milwaukee, Wis.
Perfection—¾, 1½, 2, 3, 4½, 5—Perfection Truck Co., Minneapolis, Minn.
Philadelphia Motor Coach—Phila. Motor Coach Co., Phila., Pa.
Pioneer—1—Pioneer Truck Co., Chicago, Ill.
Pittsburgher—2, 3, 3½—Pittsburgh Truck Mfg. Co., Pittsburgh, Pa.
Power—1½, 2½, 3½—Power Truck & Tractor Co., St. Louis, Mo.
Rainier—¾, 1, 1½, 2, 2½, 3½, 5—Rainier Motor Corp., Long Island City, N. Y.
Sandoz—1, 1½, 2, 2½, 3½, 5—Moses & Morris Motors Corp., Chicago Heights, Ill.
Sanford—1, 1½, 2½, 3½, 5—Sanford Motor Co., Syracuse, N. Y.
Saurer—6½, T.T.—Adolph Saurer, Inc., New York, N. Y.
Steinmetz—Steinmetz Electric Motor Car Corp., Arlington, Baltimore, Md.
Stoughton—1½, 1½, 2, 3—Stoughton Wagon Co., Stoughton, Wis.
Super Truck—2½, 5—O'Connell Motor Truck Co., Waukegan, Ill.
Traffic—1½, 2, 3—Traffic Motor Truck Corp., St. Louis, Mo.
Triangle—1, 1½, 2, 2½—Triangle Motor Truck Co., St. Johns, Mich.
Twin City—2, 2½—Minneapolis Steel & Machinery Co., Minneapolis, Minn.
Velle—1½—Velle Motors Corp., Moline, Ill.
Wachusett—1, 1½, 2, 2½—Wachusett Motors, Inc., Fitchburg, Mass.
Walker Johnson—1, 2½—Walker Johnson Truck Co., Woburn, Mass.
Walter—T.T.—Walter Truck Co., Long Island City, N. Y.
Ward La France—2½, 3½, 5—Walker Motors, Inc., New York, N. Y.
Wichita—1, 2, 3, 4—Wichita Falls Motor Co., Wichita Falls, Texas.
Wilcox—1, 1½, 2½, 3½, 5—Wilcox Trux, Inc., Minneapolis, Minn.
Witt-Will—1½, 2, 2½, 3—Witt-Will Co., Inc., Washington, D. C.

A Track Laying Device for Motor Trucks

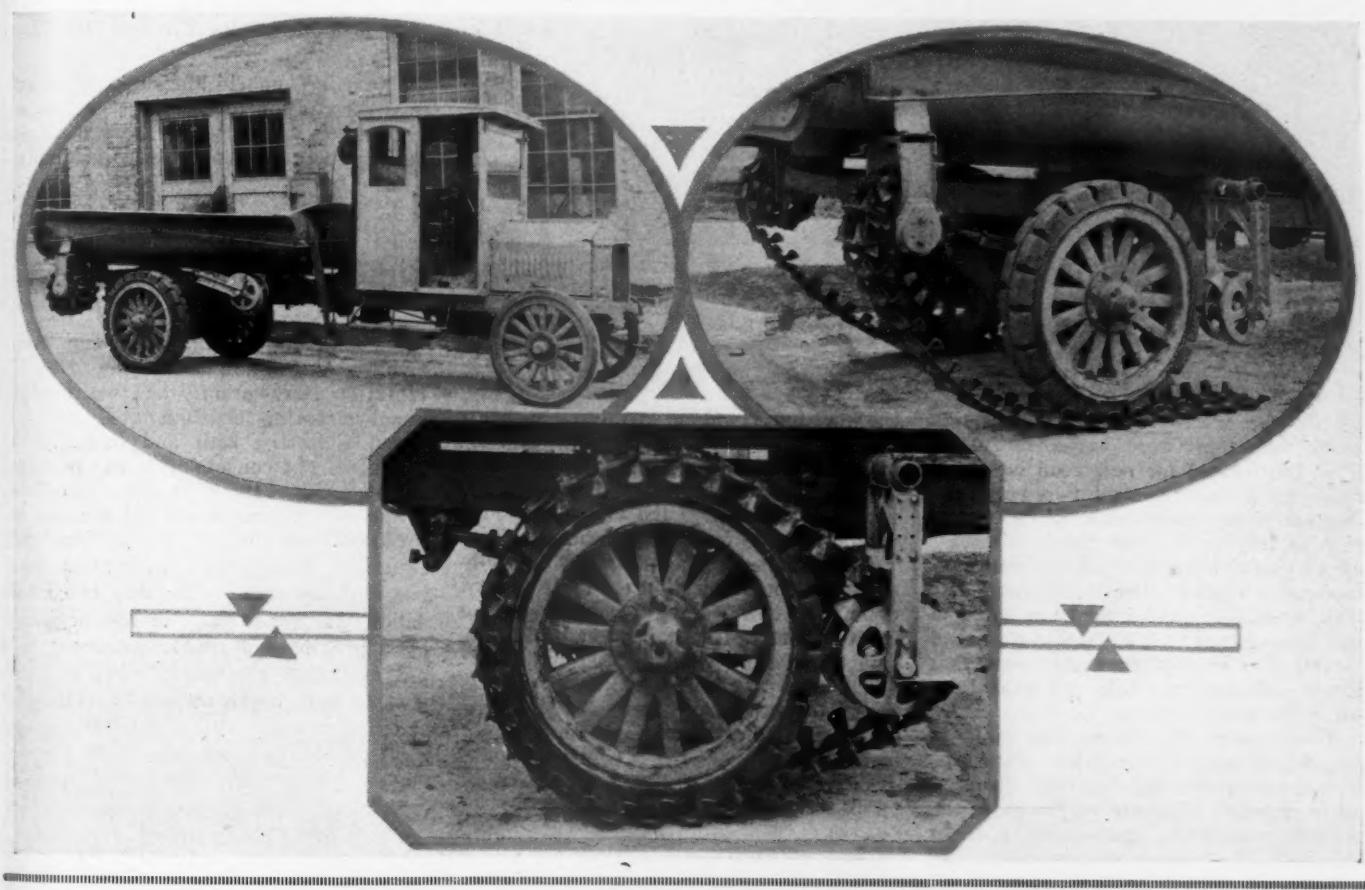
A DEVICE known as the Truk-Trak, which is adaptable to any truck without alterations to the chassis and to any of the standard tires, which can be used for getting through, or out of a mud hole as well as a host of other difficult positions is being manufactured by the Sivyer Steel Casting Co., of Milwaukee, Wis. The device consists of a track, as shown in the accompanying illustration, which is kept in tension in a novel manner. An intermediate idler, mounted adjustably on a crank arm, and running against the tires, holds the track idler in the proper position, insuring uniform tensions, regardless of the spring action. The drive is by friction from the

tire. Ordinarily only a very small tension is required. The track idlers are high enough to clear average obstructions, but low enough to help materially on soft ground, by increasing the friction surface and reducing the ground pressure per unit of contact surface. As in all track layers, the break of the track over the idlers throws a part at least of the dirt off the tracks and thus prevents the space between the grousers from clogging.

When not in use the idlers are swung up under the body and the tracks are mounted on reels. The tracks can be attached or removed in 10 minutes or less by two men and in from 15 to 20 minutes by one man. For hauling out of fields,

orchards, etc., the tracks can be left at the roadside and the loss of time due to the use of the device is then only 10 minutes per trip. Special attaching chains are provided for use when the truck is stalled.

Some of the uses claimed for the Truk-Trak are that it can be employed to advantage in getting out of a field, orchard or gravel pit, for spreading fertilizer, dumping garbage in a river bed, delivering supplies off the road to an oil well, getting from the farm to the highway in the rainy seasons, crossing a desert, making city deliveries on snow covered streets and alleys, pushing snow plows, etc. A speed in excess of 15 miles an hour has been attained with the track in position.



Stewart's Quick Acting Self-Dumper

Consistent effort of the Research and Engineering Department of the Stewart Iron Works Co. have developed a new Automatic or Gravity Dump Body for "Ford" one-ton trucks. This company has been building Steel Dump Bodies for the heavier trucks for quite a number of years. This one-cubic yard steel body is dumped by the control of the lever from the driver's seat and is returned in place with the same lever. The plant of the Stewart Iron Works Co., located at Covington, Ky., is well equipped for the manufacturing of steel bodies, radiator guards and steel parts for motor trucks. Two railroad lines run into their plant and being located near the Ohio River gives them excellent shipping facilities.



Bay City Foundry & Machine Company Crane, Type R

CONFRONTED with the task of supplying a crane that could be used in loading gravel from gravel pits into motor trucks, at the same time being light and portable, in order that it might be used in sudden repair jobs, the Bay City Foundry & Machine Co., of Bay City, Mich., has developed a crane model known as Type R. Cranes of this design have been sold to the Minnesota State Highway Department.

ment, and its ability to handle bulk material at a very rapid rate.

By having a crane which rotates completely, it is possible to employ a counterweight opposite to the boom, in this way getting capacity for rapid operation, and being able to load and handle a maximum amount of material without moving the crane.

These cranes are operated from the engine of the truck, in this way requiring care of only one engine, and simplifying



Bay City Crane Type R Mounted on Mack Truck

After the cranes were received it was found that they were extremely useful in loading gravel for new road construction, and during the past two years the Highway Department has used this equipment to very good advantage in the loading of gravel from the natural gravel pit into motor trucks. The cranes have also been used for unloading from gondola cars into motor trucks when the road construction was at such distances that it was necessary to ship the gravel by rail.

The cranes themselves are built in accordance with motor truck standards, having ball and roller bearings throughout in order to minimize the wear on the equipment. During the second year of operation, the crane shown with the orange-peel bucket worked steadily all summer, being out of commission only 2½ hours all season. The other cranes have also been handling large quantities of materials, one of them especially having been used for some time in connection with a loader and screen designed by the Minnesota Highway forces themselves. This equipment made possible the loading in one ten-hour day of over 675 yards of gravel into motor trucks, the crane using only a half-yard bucket.

The buckets used have been of different styles, as shown in the illustrations. For digging, the orange-peel has been very successful, as having also clam-shells with teeth. For re-handling work and for unloading of cars, the clam-shell is most satisfactory.

For two weeks, two of these cars unloaded ten cars of gravel daily into motor trucks, proving the efficiency of the equip-

the question of engine maintenance. They have had to do work in out-of-the-way places, one of them having assisted in the construction of a new road along the northern shore of Lake Superior. This wonderful road is being put through from Two Harbors, northeast, and is the only means of communication for the scattered population living along 145 miles of lake front in the northern portion of Minnesota up to Fort William, Ontario. It is being built of gravel, and the cranes referred to above have been used for supplying a good share of the material used in construction.



A Feature of This Crane is Its Ability to Rotate in a Complete Circle

Court Decision Opens Way for Busses to Supplement Railroads

A decision handed down February 18th by the Supreme Court is of interest to manufacturers of motor busses and trucks, for it opens a way for the further development of railroad participation in motor transport. Under this ruling, railroads will be permitted to discontinue non-paying branches, thus making it possible for truck and bus builders to interest them in substituting motor vehicles for non-paying rail transport.

The case was that of the State of Texas against the Eastern Texas Railway to restrain the carrier from abandoning its line as to intra-state traffic and the counteraction brought by the carrier against the State to prevent threatened interference by the State authorities. The carrier had won in both instances before the lower court.

The court upheld the right of a railroad corporation to dismantle its line and discontinue its service on the ground that further operation would result in financial loss.

Big Automobile Owner Organizations Join Forces

Consolidation of the American Automobile Association with the National Motorist Association, the two big national motoring organizations, was perfected February 25th and formally announced. The consolidation was perfected after a series of three meetings by officials of the two organizations and the new association will be known as the New American Automobile Association, composed of 700 clubs. The way to consolidation was made easy in the beginning by a prompt and ready agreement to a proposal that the constitution and by-laws of both organizations be eliminated and a new one written, thereby forming a virtually brand-new association.

Company Formed to Handle Truck Equipment

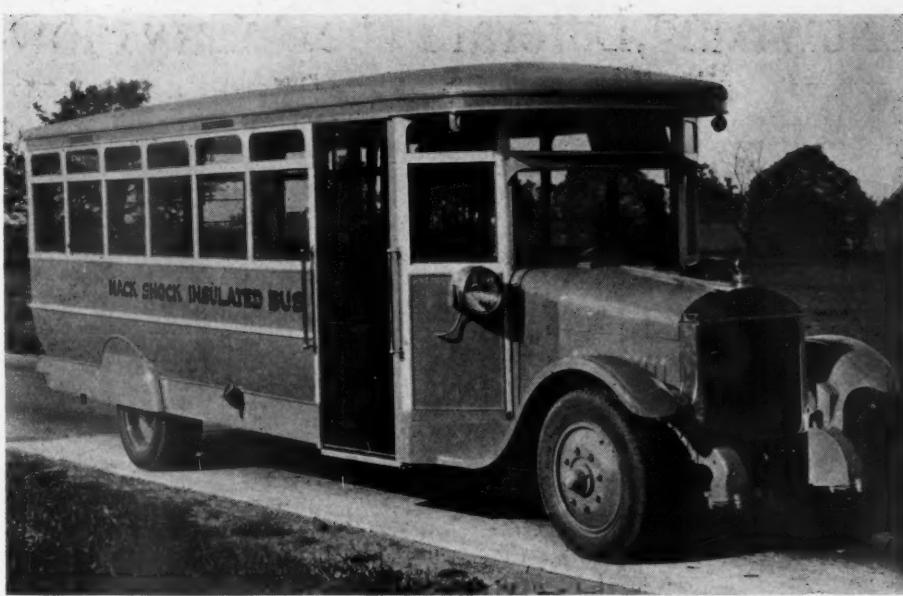
The Phila. Body & Truck Equip. Co., has been formed to handle a complete line of truck equipment in the line of bodies, cabs, hoists and winches.

The company is composed of Louis H. Hein, president; J. Marshall Harlan, Jr., vice-president; Clifford W. Colp, treasurer, and William Coulter, secretary. All of whom have until recently been connected with the Autocar Co.

Mr. Harlan started to design bodies for Autocars when they first entered the commercial field and had served sixteen years with them until his recent resignation. He worked at the Autocar factory, their Boston and New York branches and at Philadelphia where he last held the position of road manager. Mr. Hein had been the factory body designer and had charge of the entire Autocar Co. body production.

This firm is located at 2123-25 Vine St., Philadelphia, and will carry in stock at all times a complete line of Silent Hoist Winches. They are also the distributors of the Trenton Hydraulic Hoists in this territory; Metro open and closed cabs and a complete line of Arcadia Jiffy Bodies including combination and dump bodies in all capacities. Their shop is fully equipped to take care of all mounting of any winch size or hoist.

Should the truck dealer desire to submit designs of special bodies to his prospective customer, this service can be had, and the personal supervision of construction of the body itself at the plant of Fite Gibbon & Crisp Co. in Trenton is a part of the service rendered in the sale of a special body.



New Type Mack Bus for City Use

THE new low one-step city type Mack bus, while retaining many of the features to be found in the older Macks—including the rubber shock insulators—embodies many new developments which are here described.

The truss type chrome nickel steel frame is of special deep channel section construction, tapering to front and rear to give additional strength.

The specially constructed crop type front axle is equipped with long underslung springs, and a set of flat, progressive

type helper springs are used in conjunction with the regular rear springs, while the standard Mack dual reduction rear axle is, in this case, so constructed as to increase the overhead clearance. This special frame, spring, and axle construction permits a low set body, the floor being but 25½ in. from the ground.

The engine is equipped with an overgeared transmission, making possible a rate of 35 m. p. h. and at the same time, maintaining a normal engine speed.

The body design has not been changed, except that the hood has been raised to the same height as the radiator, giving the whole an attractive stream-line effect. The 35 gal. gasoline tank is located under the body, and the filler pipe is on the right-hand side, just back of the entrance door.

The front crown fenders and the mud-splash apron extending across the front, below the radiator adding greatly to appearance besides preventing mud from being splashed into the radiator. The Budd-Michelin disk wheels and 32 x 6 pneumatic tires are single on the front and dual on the rear.

Pulcher Made President of Federal Motor Truck

M. L. Pulcher, who has been vice-president and general manager of the Federal Motor Truck Co., Detroit, since its organization fourteen years ago, was elected president and general manager at the annual meeting, succeeding T. E. Reeder, who becomes chairman of the board.

Other changes in the personnel are the elevation of H. J. Warner, formerly vice-president in charge of production, to first vice-president and the naming of Hal H. Smith, a director, as vice president. R. W. Rudden, who has been assistant secretary, has been made also assistant general manager.



Air Brake System on a Tractor-Truck

The new FWD tractor-truck equipped with air brake, which is being manufactured by the Four Wheel Drive Auto Co., Clintonville, Wis. The air brake system furnishes the braking power for the brakes on the trailer as well as for the truck, furnishing a means of preventing the loaded trailer from crowding the power unit when descending grades, etc.

Snow King, Lateral Type Rotary Plow

AFULLY developed rotary snow plow for use with tractors and trucks that will operate in any kind of snow and that does not require a separate power plant is being manufactured by the Rotary Snow Plow Co., 213-215 South Sixth St., Minneapolis, Minn.

This type of plow known as the Snow King has been given a number of severe tests for the past three winters. These tests were made under the most difficult conditions and they have met with gratifying results, according to the maker.

The Snow King, lateral type, Rotary Plow is a combination of a specially designed wedge plow and two rotaries that revolve laterally with the plow. The power shaft revolves on a double row and single row ball bearing, while each fan shaft revolves on a single row ball bearing and a larger roller bearing.

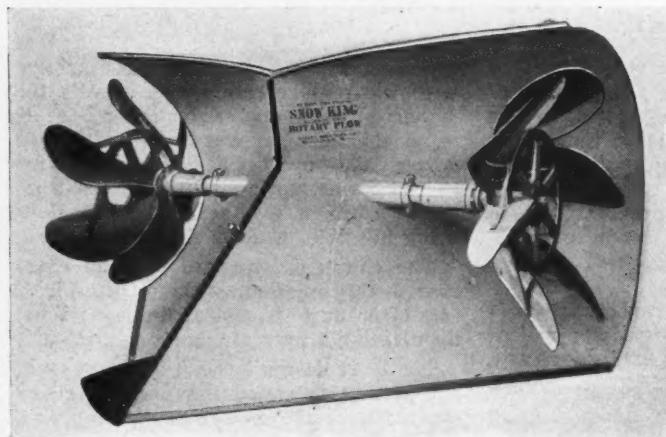
The Snow King can be divided into

buildings without damage to floors, etc. When the plow is at work the caster wheel swings suspended. It is raised and lowered from outside plow, by means of crank.

There are two rotary wheels, one on each side of the plow, revolving on ball and roller bearing equipped shafts. Their speed is one-third that of the motor. The size varies from 3 ft. to 5 ft. in diameter, depending upon the size of the plow. They can be thrown in or out of gear separately.

The rotaries are of the built-up type. A heavy steel hub supports the adapter or wheel proper. To this hub and wheel are fastened the fans that actually expel the snow.

The fans can be described as a bird wing shape. They enter the snow without impact and so have no bad effect upon the motor parts. They are attached to the hub and wheel, and supported at six points. The entire construction is as rigid



**Snow King
Model 81**

This is the smallest model of the Snow King. For use with trucks from 2½ tons up as well as 25 to 30 hp. tractors. It is particularly well adapted for speed work.

four parts: The plow, the rotaries, the transmission and the hitch.

The plow is of the snub nose type, with specially designed wings so curved as to bring the snow to the rotary fans with the least amount of friction. The wings do not touch the ground, but are fastened to the top of the sliding shoes. They are practically indestructible, being so shaped and braced that even the greatest pressure will not crack or break them.

The frame work supporting the wings is unusually rugged. The best quality steel castings are employed. The sliding shoes are removable and can be replaced. The center brackets perform the double duty of bracing the wings and furnishing the fulcrum for the adjusting mechanism. The plow can be set to cut to the surface or leave as much of a covering as desired. Large set screws operated by hand wheels are provided to adjust the suction. The two outer braces on the wings and the cross brace at the top make the plow perfectly rigid. Return shoe plates are welded to each of the wings so that the plow can be pulled backward.

A caster wheel supports the plow and swings it clear of the surface when traveling over bare ground. This is a big saving on the wear of the sliding shoes and also aids in getting the plow in and out of

as though of one piece. Snow is thrown outward from 15 to 30 feet and up to 20 ft. high.

The power for driving the rotaries is taken from the motor of the propelling vehicle. It is transmitted by means of a shaft, attached to the crankshaft, through a universal joint, so designed that if the rotaries should strike an immovable obstacle, the outside connection will give, and no damage result to the motor. The power shaft is fitted with a pinion, revolving on a ring gear, which in turn drives the rotaries by means of cross shafts. Everything is enclosed in a steel housing and all working parts run in oil.

Attachment is made by means of a hitch, designed to fit the particular type of truck and tractor used. Flexibility is obtained by means of two loosely fitted connecting arms, attached to and swinging between the frame brackets and vehicle on a line with the universal joint. This permits the plow to oscillate as much as two feet.

Three sizes are available. The smallest of these cutting an 8-ft. path can be operated with a 25 hp. tractor or 3-ton truck. The next larger size is a 10-ft. plow. This will require a 40 hp. tractor; and the larger size, cutting a 12-ft. path requires a tractor with 60 hp.

Ruggles Announces Two New Models

Two new models have been added to the Ruggles truck line for 1924. The most notable change in these two models, known as 21 and 41 compared to the previous Ruggles truck, is the lower frame height provided by the new small wheel and tire size combined with longer, flatter springs and lengthened spring shackles. The two trucks are of 3000 and 4500 lb. payload capacity with wheelbase of, respectively, 150 and 148 lb.

Both have the Ruggles 4 x 5 four-cylinder engine, Brown-Lipe transmission gearset, Brown-Lipe multiple disk clutch with a Columbia three-quarter floating bevel axle on the 3000 lb. model and a Ruggles double reduction gear on the 4500 lb. model. The final gear ratio on the 3000 lb. model is 5.12 to 1 with ratios of 20.5 to 1, low speed, and 8.7 to 1, second speed. On the 4500 lb. capacity chassis the gear ratios are 7 to 1 on direct, 28 to 1 on low speed and 11.8 to 1 on high speed. The weights of the two vehicles are, respectively, 3000 and 4250 lb.

Standard equipment includes electric lighting and starting on the 3000 lb. model, without seats or cushions. On the 4500 lb. truck the standard equipment includes seats and cushions and oil lights front and rear. The tire sizes are, for model 21, front 30 by 5 pneumatic cord and rear 32 by 6 and on model 41, front 30 by 5 pneumatic cord and rear 34 by 7, solid, or 34 by 7 pneumatic cord, optional, extra cost.

Ward LaFrance Undergoes Reorganization

The Ward LaFrance Truck Corp., Elmira, N. Y., has been reorganized with A. Ward LaFrance as president and Joseph G. Grossman as secretary and treasurer. These two men assume full ownership of the company including the factory and contents at Elmira, trade name, good will, etc., and will continue in the manufacture and sale of Ward LaFrance trucks. Three improved models will be in production in March.

The company has recently purchased a new building at New York City on 139th St. and Southern Blvd., which will be used as a sales and service room.

Heil Issues New Catalog of Road Building Equipment

The Heil Company, Milwaukee, Wis., has released its latest Bulletin, No. 131, describing Heil Hydro Dumping Equipment especially suited for road building work. This attractive folder has been broadcasted to all those interested in road construction and will be sent to anyone free on request. Bulletin No. 132, also just issued, describes the Heil-Ford Gravity Dump Body, especially the new Dump-Quick, and SSC Gravity Type Platform Body.

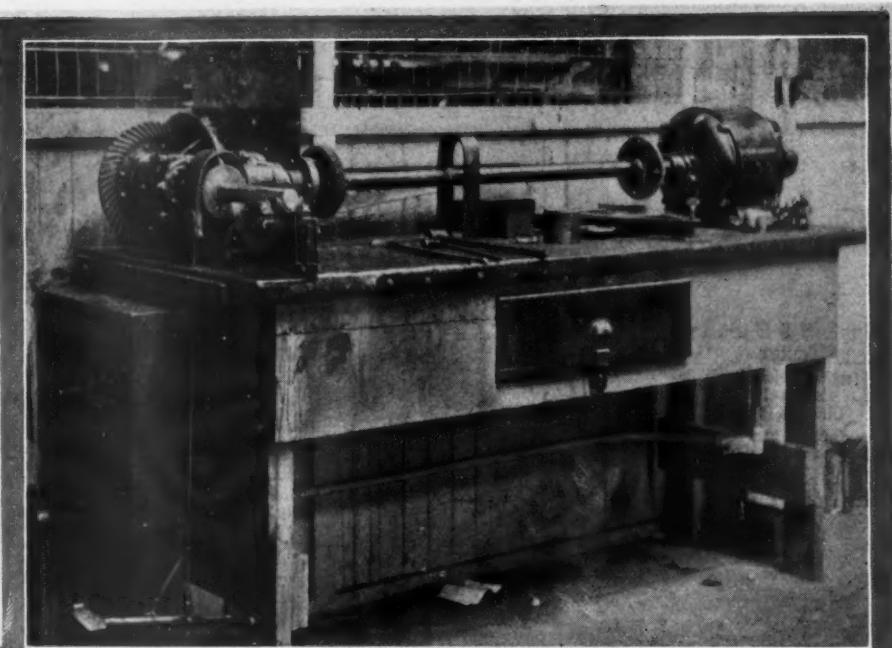
C. E. Stohl has been made sales manager of the Monogram Lens Corp., 52 Vanderbilt Ave., New York City.

IDEAS FOR THE REPAIR SHOP

Novel Differential Testing and Adjusting Stand

The accompanying photo shows a novel differential testing and adjusting stand, so constructed that the differential can be tested and adjusted to meet the variable load conditions before installing in the car, where, in order to get the same results, the car would have to be taken out and tried out many times.

The device is operated by an electric motor which has a special switch for regulating the motor and for reversing same. The device is provided with different size brake drums (operated by a foot lever) for different size differentials.

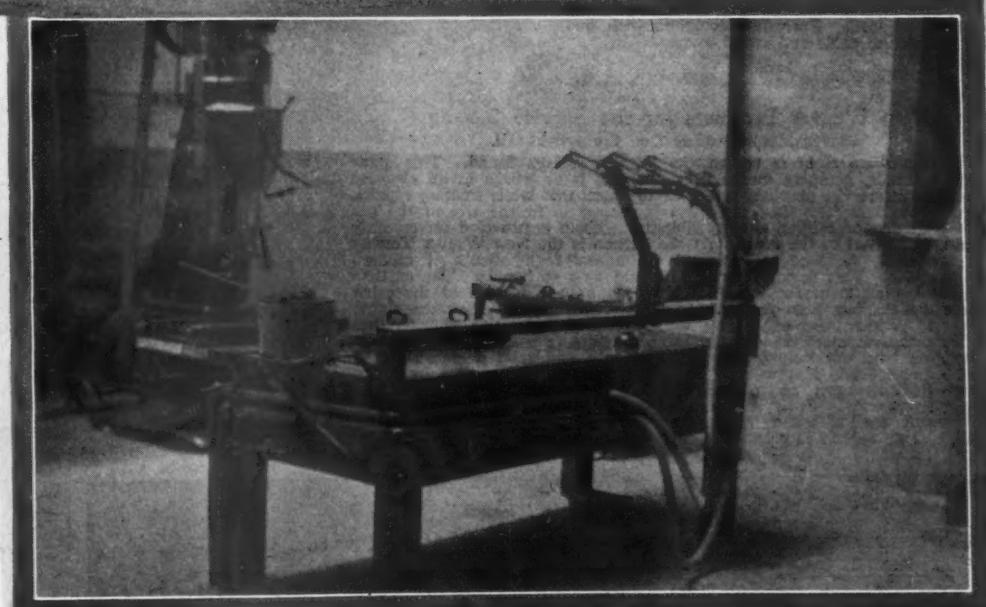


Shelf Arrangement for Storing Fenders and Radiators

A very novel method for storing fenders and radiators is shown in the accompanying photo. Special compartments are made for each individual fender or radiator. The fender is placed on a wooden rack which slides into the compartment thus keeping the fender from becoming scratched or otherwise injured.

Special Rebabbitting Machine Accommodates Two Blocks at One Time.

This special rebabbitting machine slides back and forth on a steel track accommodating two blocks at one time. A wooden table carries the metal track, and the air and gas leads are connected to pipes under the ground.

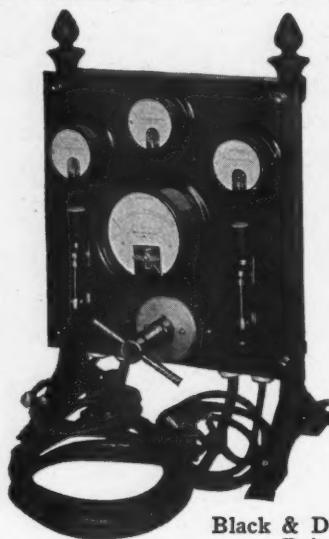


Service Station and Repair Shop Appliances

Weidenhoff 5 B Battery Tester

Joseph Weidenhoff
4356 Roosevelt Blvd.
Chicago, Ill.

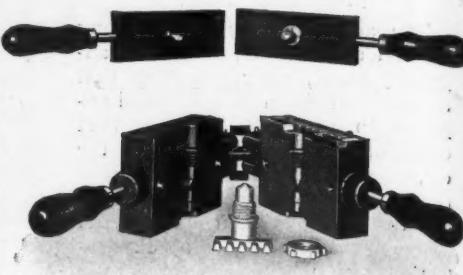
This equipment can show the voltage drop of each one of 3 cells at the same time while the battery is under any rate of discharge from zero to 600 amp. It is a convincing test. The price is \$69.50.



New Ambu Mold

American Bureau of Engineering, Inc., 2632 Prairie Ave., Chicago, Ill.

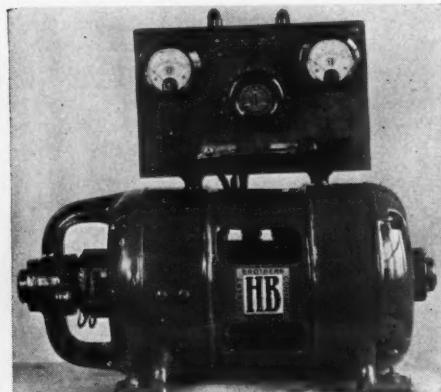
This new mold is a time and labor saver in the shop. It makes the popular type threaded post-strap lead casting with comb or plain and the sealing nut standard, $\frac{1}{8}$ in. sizes. Both castings are made in the single mold. The leverage facilitates opening. The upper left illustration shows pouring gate and the upper right has mounted a thread die for the sealing nut casting together with a pouring gate. This is known as type 25-A mold and lists at \$19.



Black & Decker No. 3 Electric Screw-Driver and Socket Wrench

Black & Decker Mfg. Co.
Towson, Md.

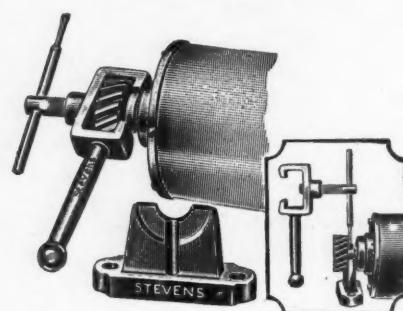
This tool weighing 15 lb., has been designed particularly for driving very large wood screws, lag screws and running up nuts on large bolts. The spindle is equipped with a positive clutch which automatically disengages when the forward pressure on the tool is released. The patented pistol grip and trigger switch is standard equipment on this tool. A universal motor furnishes the power and all standard voltages up to 250 can be supplied. This new tool lists at \$88 in the U. S. and \$108 in Canada.



Hobart Constant Potential Outfit

The Hobart Bros. Co., Troy, Ohio

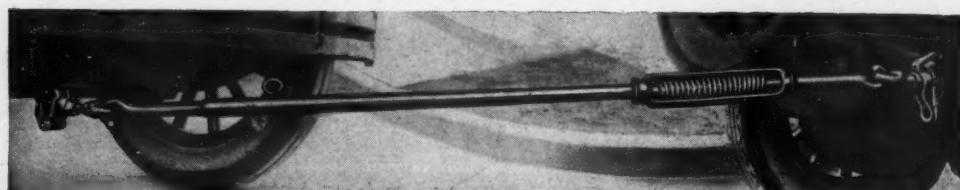
Illustrating the new Constant Potential 125-amp. outfit with a 10 to 22 battery daily capacity. This outfit is equipped with a new HB patented voltage regulating winding which the maker claims cannot reverse and maintains a constant voltage under all conditions of load. Furnished complete with bus bars, connecting cable and switchboard.



New Weaver Products for the Service Station

Weaver Manufacturing Co., Springfield, Ill.

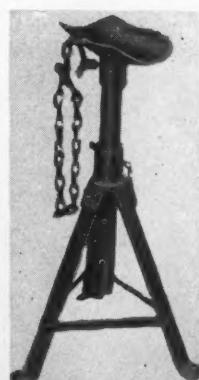
At the immediate right is shown the Weaver Safety Stand. This stand affords a simple, compact means of supporting light trucks in an elevated position to insure the absolute safety of the mechanic while making repairs, says the manufacturer. The top plate is shaped to fit the tire of the car and as a further precaution against slipping, a chain is provided for securely clamping the wheel to the stand. At the bottom is the New Weaver Towing Pole, model D, designed to meet all the varied requirements of modern towing service. This device is well built and easy to handle. The cushion spring and adjustment for length, which has been a feature of the other Weaver models, has been retained. The third photograph (extreme right) shows the Weaver Universal Tire Changer. This new tire changer has been developed to meet the demand for a quick, safe and convenient means of changing tires not only on all types of split and solid detachable rims but also on wire and disk wheels. It will handle pneumatic tires including the new balloon type, up to and including 7 in. both for light trucks and passenger cars. It is mounted on a strong wooden platform which eliminates the need of bolting it to the floor and enables it to be removed when desired. Floor space, 42 x 42 in. Shipping weight, approximately, 250 lb.

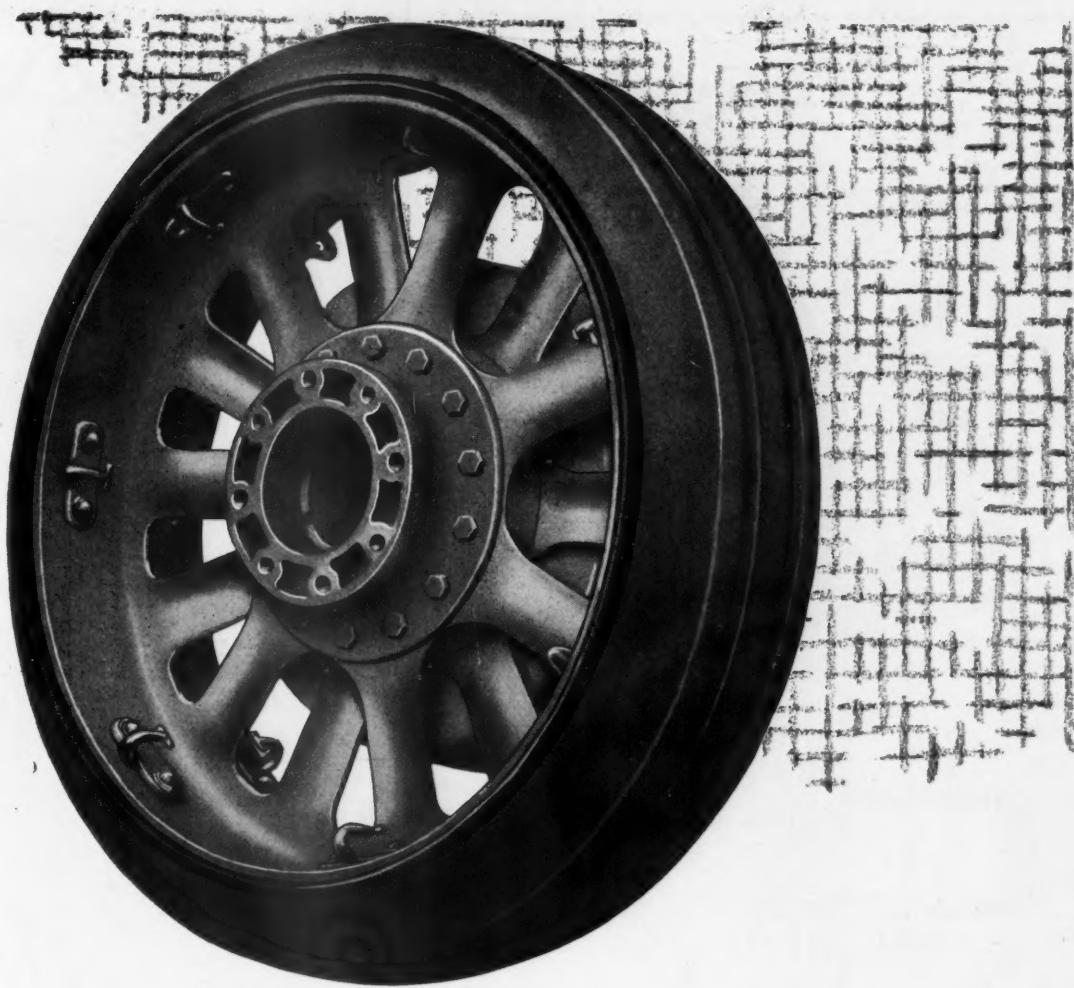


Stevens Generator Gear Puller for Fords

Stevens & Co., 375 Broadway, New York City

A convenient tool for the automobile repairman to remove the gear from a generator on a Ford is being manufactured by the above named company. Note the handle which speeds up the pulling of the gear and the unique arrangement of the punch. This appliance is known as No. T-180. The body of this tool is drop-forged and the punch is made of machine steel. The block is designed to take the strain off bearings when removing or replacing pin. This block is grooved to receive the pin and may be permanently fastened to the work bench. Price, \$2.





Resilient tires—why not Resilient wheels?

HOW long would a truck last if it ran, not on tires of soft, shock-absorbing rubber, but on tires of rigid metal?

Unprotected by resilient tires, how long could a truck endure the shattering jolts due to cobblestones, car tracks, badly paved roads?

No truck owner would dream of using rigid, unresilient tires. No truck owner could afford to. Economy dictates resilient tires.

Why not resilient wheels?

The Bethlehem Wheel is not intended to fulfill the

function of either the tires or the springs. But it can and does help in absorbing shocks and jolts. Its rolled steel construction gives this wheel resiliency that lessens wear and tear on every part of the truck.

The Bethlehem Wheel is the one metal wheel that is resilient. Trucks equipped with it last longer, run more smoothly, and at lower cost.

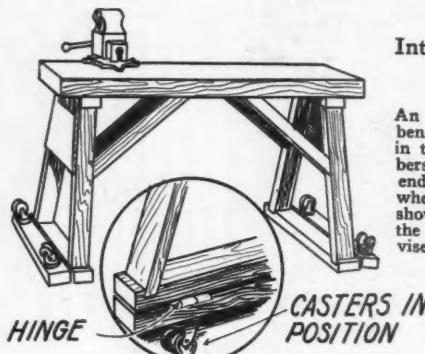
BETHLEHEM STEEL COMPANY

GENERAL OFFICES: BETHLEHEM, PA.

Sales Offices in Boston, New York, Philadelphia, Baltimore, Washington, Atlanta, Pittsburgh, Buffalo, Cleveland, Cincinnati, Detroit, Chicago, St. Louis, San Francisco

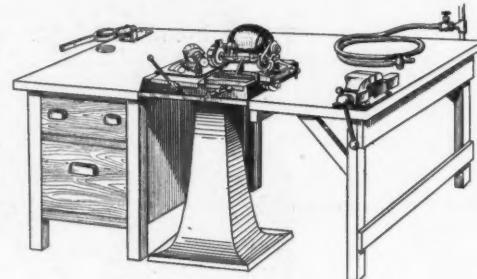
BETHLEHEM ROLLED STEEL TRUCK WHEELS

—SHOP HINTS—



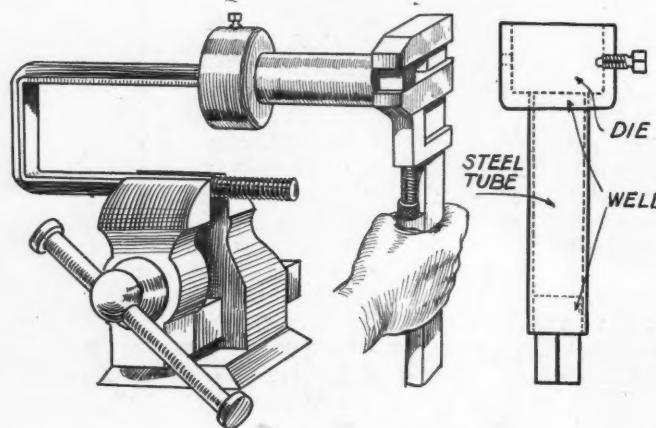
Interesting Type of Portable Work-Bench for Garage Repairman

An interesting type of portable work-bench for garage repairman is shown in the accompanying photo. Cross timbers carrying casters are hinged to the ends of the bench, and turned under when it is to be moved. The photo shows the position of the casters when the workbench is to be used. Note the vice attached to the work-bench.



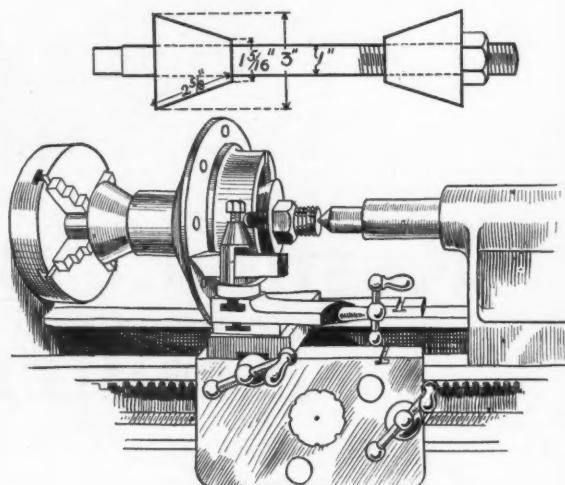
Valve Work-Bench

Greater efficiency in valve work is made possible by the work-bench employed by the New England Motor Sales Co., Greenwich, Conn., service station for Buicks. In the bench illustrated herewith, the top or table is recessed to take the valve refacing tool which is mounted on a pedestal. The valve spring compressor is mounted at the left. On the right is a compressed air gun for cleaning. There are two drawers, the upper one being used for storing various attachments of the machine. The bench is about waist high.



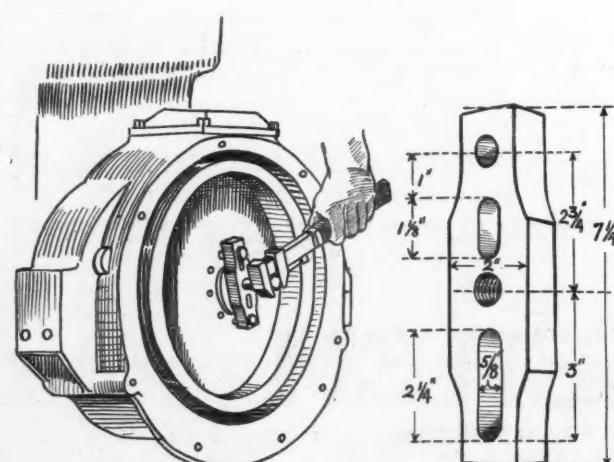
Spring Clip Kink

In running a die over spring clips to recut damaged or new threads it is difficult to run the die down where the clip is a long one. A holder for die is made by using a cup shaped member of practically the same inner diameter as outside diameter of the die and welding to the cup a piece of steel tubing. To the stock is welded a square piece of stock. The die is held in place by a stud and screw. To use, a wrench is applied to the square end. Any length of spring clip can be threaded if the tube member is made long enough. Two or three of these die holders will take care of a number of sizes.



Ring Gear Truing Jig

Unless care be exercised in removing and replacing the rivets from the ring gear when a new one is to be installed, the plate or housing is likely to be sprung. Consequently when the new ring gear is installed it will not run true. Such a condition will make it extremely difficult to obtain a tooth contact that will be quiet. In the service station of the New England Motor Sales Co., Greenwich, Conn., the jig shown in the above illustration is employed to test the assembly. The jig is mounted in the lathe between centers and any spring is quickly noted. If sprung a slight cut is taken in the plate to which the ring gear is attached. Of course the test is made before the new ring gear is attached.



Flywheel Puller

The New England Motor Sales Co., Greenwich, Conn., sells and services the White line of trucks. The machinist of this concern constructed the flywheel puller shown in the sketch at the left and it is held to be very useful. The holes are drilled to take 3/4-in. bolts, the center being threaded. There are three bolts used, two 4 3/4 in. long and one 4 in. long.



THE NEW WAY OF STEERING

The reception accorded the Ross Cam and Lever Steering Gear indicates its appreciative acceptance as a new standard in the automobile industry

Ross Gear & Tool Co., 760 Heath St., Lafayette, Ind.

ROSS
CAM and LEVER STEERING GEARS

EASIER STEERING LESS ROAD SHOCK

If I Were a Commercial Car Salesman

Tips From Successful Salesmen in Various Branches of Business on Motor Truck Merchandising. Getting the Viewpoint of the Unbiased Outsider. As told to

FRANK H. WILLIAMS

EVERY now and then it is a good thing for the commercial car salesman to get a different slant on his business. By the very nature of his work the commercial car salesman has to stick pretty close to his job and this tends to give him a strictly personal, perhaps one-sided view of the business. And, of course, as the very best results can be obtained in the selling of commercial cars by having a broad, comprehensive grip of the whole situation and by applying the best sales methods in all lines to the job of selling trucks, it would be a good thing for every commercial car salesman to find out the sales methods used by other salesmen which he could use in his own line of work.

And with this thought in mind the writer recently asked a number of top-notch salesmen in other lines just how they would go about the job of selling commercial cars if they were to drop their present lines of activity and get into the automobile business.

Some very interesting and worth while suggestions resulted from this voyage of discovery, as it might be called. Among the most interesting of the things suggested by the various salesmen who were interviewed were the following:

SUGGESTION BY A DRUG JobBERS' SALESMAN—"If I were selling commercial cars I'd make it a point of seeing to it that every firm or individual who ever bought a truck from me never bought any other sort of a truck from any other salesman. For instance, if a creamery company purchased one truck from me I'd stay on the job, so far as that company was concerned, so successfully that when they came to buy another truck I'd be the person who made the sale. I'd see to it that no other fellow slipped in on my customer and sold a car to him.

"Then, every time I made an additional sale of a truck to a concern which had already purchased one or more trucks from me I'd hop to it, spreading the glad tidings around where they would do the most good. I'd tell all my prospects about the concern having bought another commercial car from me and I'd hammer home the fact that this additional purchase was another evidence of the splendid nature of the truck and the fact that it was giving the most perfect service and all that sort of thing.

"It is my firm belief that all this would be a very decided boost for sales."

SUGGESTION BY A WHOLESALE TOBACCO COMPANY—"Of course, selling commercial cars is quite different from selling tobacco but as I have several friends who are engaged in the business of selling trucks, I feel that I know something about the business. If I were to get into the motor truck selling business I'd base the major part of my selling campaigns on a sort of time-table that I would prepare for each prospect, suggesting just how he could use the truck to the best advantage every day in selling more goods, in making more deliveries, or in making more money. And, of course, in each instance I'd first learn all I could about the prospect's need for a truck so as to be well able to figure out a good time-table for him.

"For instance, suppose that I was going to try and sell a truck to a grocer. In such a case I would find out something about the grocer's need for a commercial car. I would find how many deliveries he had on the average each day. I'd find out how lengthy his deliveries were and all that sort of thing. And then I'd frame up a time-table for the grocer showing when he could make deliveries to the best possible advantage and just how to route the deliveries so as to conserve time and mileage and all that sort of thing.

"And so on with all the other kinds of business to which I was trying to make sales.

"I'm sure that if I went to a grocer with that sort of a proposition I could get his interest at once. And the mere fact that I was going so deeply into the proposition of trying to be a help to him would make him feel more than ordinarily interested in me and more than ordinarily kind toward me. All of which would be a very big help to me in making more sales, I am fully convinced."

SUGGESTION BY A READY-TO-WEAR SALESMAN—"I have found in my business that there is nothing quite as helpful to me in making sales as to lay myself out to make a deep impression on the prospect. For instance, when I arrange a particularly attractive display of ready-to-wear at the hotel and when I go the limit in making the display room interesting and attractive, I always make a much deeper impression on the merchants

who come into the room than would otherwise be the case.

"And it seems to me that if I were out trying to sell commercial cars I'd do the same thing. For instance, if I were trying to sell a bakery, I'd familiarize myself with the route to be covered by the delivery truck. And then I'd get the baker to go with me while I went over the route and stopped at each house on the route that was a customer of the bake shop. All the time I was doing this I'd be showing the baker how easily and quickly the car made the stops, how nicely it handled in traffic and how it conserved gasoline and oil.

"A demonstration of this sort could not fail to make a very deep impression on the baker and I am confident that this impression would help me greatly in making a sale to him. Also in doing the same sort of thing with all the other prospects I'd be helping along sales with them just that much. All of which would be a booster for sales."

SUGGESTION BY A WHOLESALE GROCERY CONCERN—"I find in calling on the grocery trade in my territory that they are all pretty progressive men who are far-sighted as a general thing and who are interested in anything which will make them some money, even if it calls for a large initial investment and the lapse of a considerable period before they cash in on the proposition.

"So if I were selling commercial cars to grocers or to any other class of business houses I'd always strongly emphasize the money-making end of the purchase. I'd prove to them in black and white that by buying the car I was trying to sell them they'd be making an investment which would eventually mean more money for them. The figures to prove all this, I would get from folks who had already purchased cars from me or from the dealer in whose employ I was working.

"Dollars and cents, in the final analysis, is the strongest urge to make a man or a firm buy a commercial car. So why not emphasize it just as strongly as possible all the time in selling such cars?"

Salesmen of commercial cars may do a little research work along this line themselves. It will be surprising what new slants can be obtained on this business, from those on the outside.

ACME

*On the radiator of every
Acme is this Seal of
Dependable Performance*



*Trade - Mark Registered
U. S. and other countries*

"Acme Motor Truck Franchise the Backbone of Our Business"

N. E. Ellis, Mutual Garage, Connellsville, Pa.

In the same letter Mr. Ellis says: "We have handled Acmes with success for four years. Its performance has been so good our customers have the highest regard for them. That assures us a bigger volume of sales each year. The Acme Franchise is the backbone of our business and will continue to be as long as we are in business."

Extraordinary success is the dominant note in the above comment and is typical of all the many letters we receive from Acme Dealers.

We have actual proofs—not merely our say so—but positive records of the success of Acme Dealers and the Acme Truck wherever it was introduced.

On the basis of part for part, the Acme is one of the most economical and dependable trucks built. We invite you to inspect them thoroughly and jot down its many outstanding features. Then compare with any other nationally known truck.

And there is an Acme for every need—from a speed truck to one of 12,500 pounds capacity.

The Acme proves a money-maker for every dealer because it proves a real money-maker for every one of its owners.

Learn something to your interest by sending for full details of the Acme Franchise today. There's no obligation.

Acme Motor Truck Company
529 Mitchell St. Cadillac, Michigan

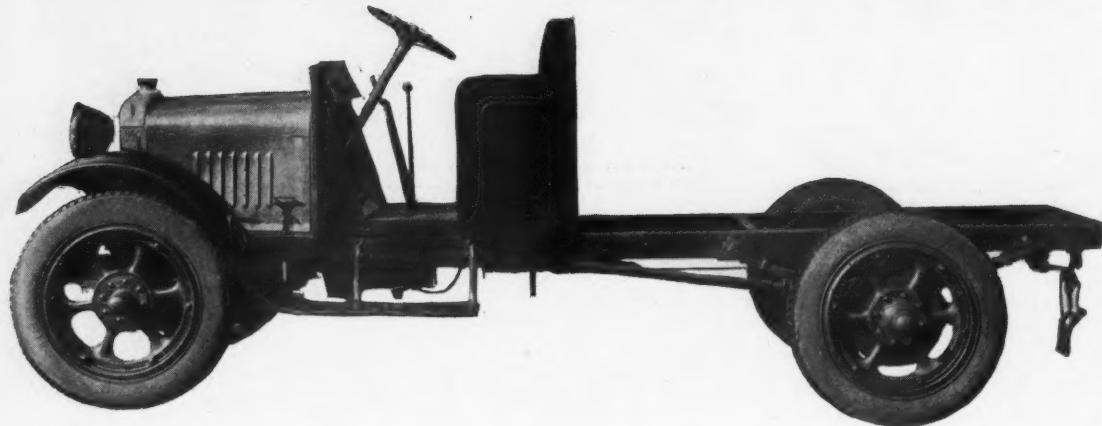
The Truck That Moved a Town

A standard Acme Truck and an Acme-designed trailer moved the entire town of Jennings, Michigan, to Cadillac, Michigan. All the homes were moved, as well as a church 70 feet in height.

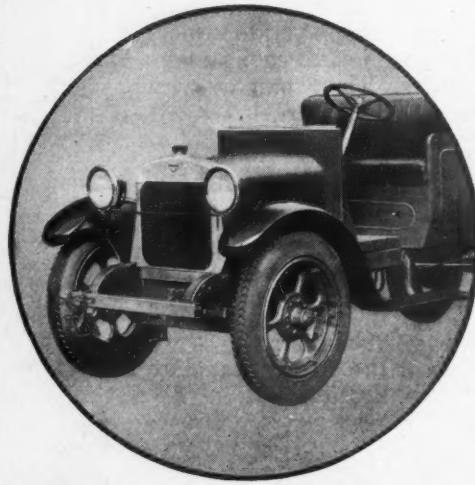
ACME

Commerce

MODEL 11



THE COMPLETE, STURDY, ONE-TON TRUCK



COMMERCE ALUMINUM SHELL RADIATOR

Made Up of the Finest Units:

CONTINENTAL MOTOR
SALISBURY SPIRAL BEVEL GEAR AXLE
FULLER TRANSMISSION and DISC CLUTCH
BOSCH ELECTRICAL SYSTEM
JACOX STEERING GEAR
STEWART VACUUM FEED
BOSCH MAGNETO
SMITH CAST WHEELS
34x5 TRUCK CORD PNEUMATICS, Etc.

Complete with Electric Starter, Lights, Horn and Metal Driver's Seat

MODEL 11 IS A REAL SALES GETTER

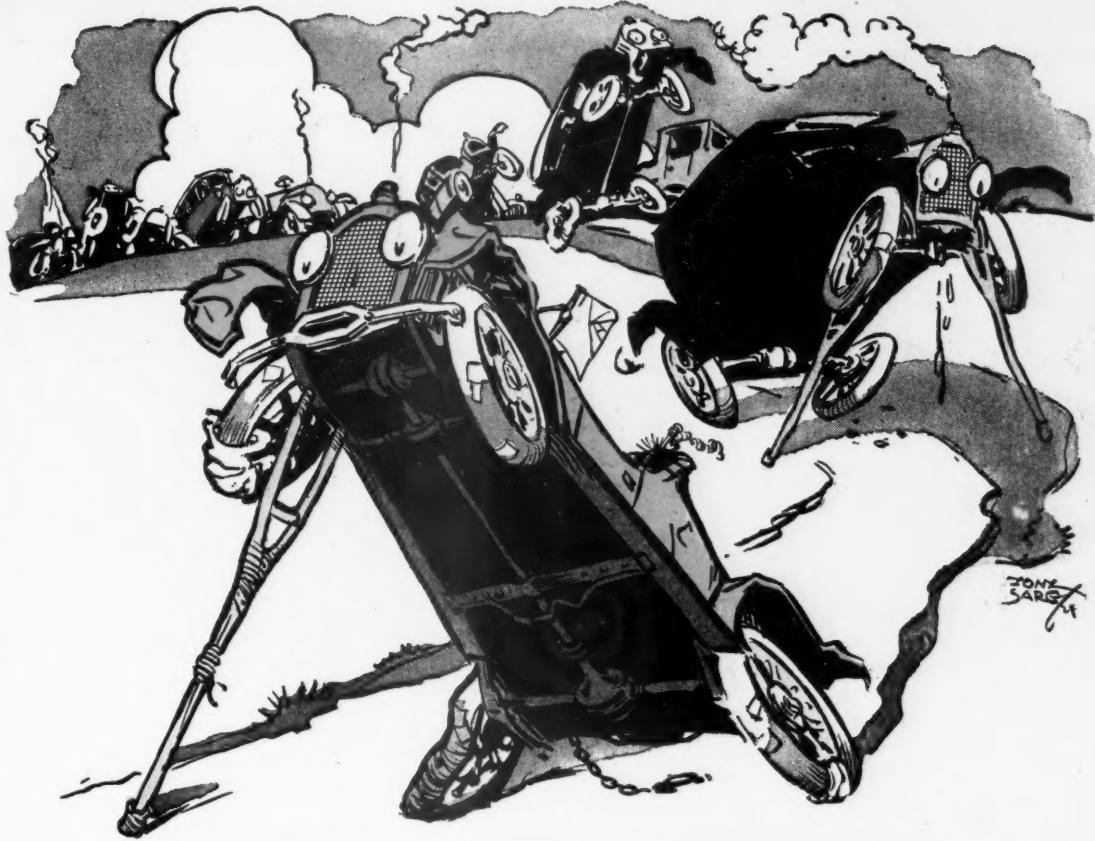
Write Today for Detail Specifications, Price and Dealer's Proposition

YOUR TERRITORY MAY BE OPEN

COMMERCE MOTOR TRUCK CO.
YPSILANTI, MICHIGAN

EXPORT DEPARTMENT
132 Nassau St., New York City

CABLE:
COMERSTRUX



How are they coming?

SPRING approaches. Worn down models of yesteryear are beginning to limp into your shop with sprains, weak joints and internal disorders. You are expected to put them on the road again.

It is your chance, not only to remedy the owner's complaint, whatever it is, but to examine each car for other ailments—repair them all completely and send the car out on the road again with a renewed youth and vigor.

The car owner wants you to do just this. He wants you to use the best of materials in your repairs. We are doing our best to provide you with such materials—as you will learn by reading the next few pages.

JOHNS-MANVILLE
Automotive Equipment

Keep their cars well braked,



Brake lining business is all around you. It's driving by your place. It stops at your curb-pump for gas. It's right inside your garage on storage cars.

One car in eight needs relining—so the New York Police Squad discovered. One car in eight is a prospect for you. Think of your increased profits if you could get the relining business of one car in every eight that you come in contact with. We believe that you can. Some of our suggestions are shown on the right hand column of the opposite page.

Remember this

When you once get a prospect thinking about having his brakes relined—one of the best arguments that you can use to clinch the business, is the fact that you reline with Johns-Manville Asbestos.

Your prospect knows that Johns-Manville means "asbestos specialist." He knows that the safety of his car depends on the quality of his brake lining.

In fact, he thinks Johns-Manville lining is almost as good as we *know* it is—which is saying a lot.

Don't forget— the rest of the JOHNS-MANVILLE line —

Johns-Manville Asbestos Clutch Facings
—These facings are easy to attach, being all drilled and counter-sunk—and you can order them directly from your Distributor's stock as you need them.

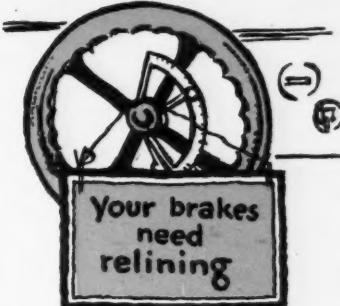
Johns-Manville Automobile Tape
—There are three things about this tape that users like. It is strong, it does not fray, and it stays sticky.

Johns-Manville Automotive Seigelite Sheet Packing—For gaskets on crank case covers, clutch covers, transmission and differential covers, etc.

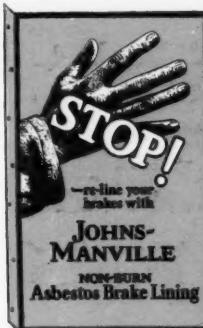
Johns-Manville Automotive Service Sheet Packing—Has no equal for cylinder-head gaskets, intake and exhaust manifolds, and water pipe connections.

JOHNS- MANVILLE Automotive Equipment

A few suggestions



Have your night man examine the brakes of all your storage cars. Where he finds re-lining necessary, he can attach a note to that effect on the steering wheel for the owner's information. There's a lot of business like this right inside your garage.



Put this attractive flange sign up on your shop-front. It'll help catch some of the brake lining business that drives by. Get yours from your distributor.



Get some of these advertisements in your local newspapers—over your own garage name. They not only go out and get the business, but establish a lot of goodwill that turns into business later on. Ask your distributor for the cuts—free.

Choose your distributor,

Alabama
Moore-Handley Hardware Co.,
Birmingham
Johnson Tire & Auto Co., Montgomery

Arkansas
Crow-Burlingame Co., Little Rock

California
Chanslor & Lyon Co., Fresno
The Banta Company, Los Angeles
Chanslor & Lyon Co., Los Angeles
Featherstone, E. A., Los Angeles
McCoy Motor Supply Co., Los Angeles
Chanslor & Lyon Co., Oakland
Weinstock-Nichols Co., Oakland
Kimball-Upton Co., Sacramento
P. W. Gavin Company, San Diego
Chanslor & Lyon Co., San Francisco
McCoy Motor Supply Co., San Francisco
Weinstock-Nichols Co., San Francisco
California Auto Supply Co., Stockton

Colorado
Auto Equipment Co., Denver
Foster Auto Supply Co., Denver
Motor Accessories & Tire Co., Pueblo

Connecticut
Hessel & Hoppen Co., New Haven
Motor Tire Service Co., Putnam

District Columbia
National Electrical Supply Co.
Rubel, Chas., & Co.

Florida
Baughman Company, G. Norman,
Jacksonville
Baughman Company, G. Norman, Miami
Baughman Company, G. Norman, Tampa

Georgia
Alexander-Seewald Co., Atlanta
Osburn-Abston & Co., Atlanta
The Frank Corporation, Savannah

Illinois
Automobile Supply Co., Chicago
Chicago Automobile Supply House,
Chicago
Motor Car Supply Co., Chicago
Sheridan Auto Supply Co., Chicago
Tenk Hardware Co., Quincy
Washington Auto Supply Co., Washington

Indiana
Orr Iron Co., Evansville
Lomont & Co., Fort Wayne
The I. J. Cooper Rubber Co., Indianapolis
Goodlin Auto Equip. Co., South Bend

Iowa
Cedar Rapids Auto Supply Co., Cedar
Rapids
Sieg Co., Davenport
Herring Motor Co., Des Moines
Repase Auto Co., Waterloo

Kansas
The Weldon Motor Supply Co., Salina
Southwick Auto Supply Co., Topeka
The Massey Hardware Company, Wichita

Kentucky
Peaslee-Gaulbert Co., Louisville

Louisiana
Shuler Auto Supply Co., New Orleans
Interstate Electric Co., Shreveport

Maine
The Farrar-Brown Co., Inc., Portland

Maryland
Auto Supply Co., Baltimore
Coggins & Owens, Baltimore

Massachusetts
Lincott Supply Co., Boston
Motor Tire Service Co., Fitchburg
Duncan & Goodell Co., Worcester
Motor Tire Service Co., Worcester

Michigan
E. A. Bowman, Inc., Detroit
Tisch Auto Supply Co., Grand Rapids

Minnesota
Kelley-Duluth Co., Duluth
Minneapolis Iron Store Co., Minneapolis
Reinhard Bros. Co., Minneapolis
Williams Hardware Co., Minneapolis
Nicol, Dean & Gregg, St. Paul

Missouri
Joplin Supply Co., Joplin
The Faeth Company, Kansas City
Ayers Auto Supply Co., St. Joseph
Beck & Corbett Iron Co., St. Louis

Missouri (cont'd)
Fred Campbell Auto Supply Co., St. Louis
Geller, Ward & Hasner, St. Louis
Ozark Motor & Supply Co., Springfield

Montana
Northwestern Auto Supply Co., Billings

Nebraska
Nebraska Buick Auto Co., Lincoln
Storz-Western Auto Supply Co., Omaha

Nevada
Nevada Auto Supply Co., Reno

New Hampshire
Thompson & Hoague Company, Concord

New Jersey
Economy Auto Supply Co., Newark
Pruden Hardware Co., Newark

New York
Albany Hardware & Iron Co., Albany
Martin-Evans Co., Brooklyn
H. D. Taylor Co., Buffalo
Barker, Rose & Clinton Co., Elmira
Weaver-Ebbling Automobile Co., N. Y. C.
Pruden Hardware Co., W. E. N. V. C.
Whitemore-Slim Co., Inc., N. Y. C.
The Olmsted Co., Inc., Syracuse

North Carolina
Carolina's Auto Supply House, Charlotte
Glasgow-Stewart & Company, Charlotte
Automobile Supply Co., Wilmington

North Dakota
Grant-Dadey Company, Fargo

Ohio
The Penn. Rubber & Supply Co., Akron
C. D. Auto Supply Co., Cincinnati
The I. J. Cooper Rubber Co., Cincinnati
The Penn. Rubber & Supply Co.,
Cincinnati
The Penn. Rubber & Supply Co.,
Cleveland
The I. J. Cooper Rubber Co., Columbus
The Penn. Rubber & Supply Co.,
Columbus
The I. J. Cooper Rubber Co., Dayton
The Penn. Rubber & Supply Co., Toledo
The Penn. Rubber & Supply Co.,
Youngstown

Oklahoma
Severin Tire & Supply Co., Oklahoma City
Severin & Company, Tulsa
Machinery & Supply Co., Tulsa

Oregon
Wiggins Company, Inc., Portland
Chanslor & Lyon Co., Portland

Pennsylvania
Motor Accessories Co., Allentown
Central Supply Co., Altoona
The Penn. Rubber & Supply Co., Erie
Franklin Motor Supply Co.,
Harrisburg

Pennsylvania
General Auto Supply Co., Harrisburg
Johnstown Auto Co., Johnstown
General Auto Supply Co., Lancaster
The Penn. Rubber & Supply Co., Oil City
Berrodin Auto Supply Co., Philadelphia
Gaul, Derr & Shearer Co., Philadelphia
Roberts Electric Supply Co., H. C. Phila.
Dyke Motor Supply Co., Pittsburgh
Jackson Motor Supply Co., Pittsburgh
General Auto Supply Co., York

Rhode Island
Belcher & Loomis Hardware Co.,
Providence

South Carolina
Franke Co., Inc., C. D., Charleston
D. W. Alderman, Jr., Inc., Florence
D. W. Alderman, Jr., Inc., Greenville

South Dakota
L. & L. Motor Supply Co., Sioux Falls

Tennessee
Southern Auto Supply Co., Chattanooga
The I. J. Cooper Rubber Co., Knoxville
Osburn-Abston & Co., Memphis
Auto Supply Co., Nashville
The I. J. Cooper Rubber Co., Nashville

Texas
Ferris-Dunlap Co., Dallas
Tri-State Motor Company, Inc.,
El Paso
The Equipment Co. of Texas,
Fort Worth
Meyer Co., Jos. F., Houston
The Southern Equipment Co.,
San Antonio
McCauley-Ward Motor Supply Co.,
Waco

Utah
Inter-Mountain Electric Co.,
Salt Lake City
Motor Mercantile Co., Salt Lake City

Vermont
Vermont Hardware Co., Burlington

Virginia
The Owens-Merritt Co., Danville
Piedmont Hardware Co., Danville
Crump Co., Benj. T., Richmond
Meadows-Price Co., Roanoke

Washington
Chanslor & Lyon Co., Seattle
Reynolds & Reynolds, Seattle
Chanslor & Lyon Co., Spokane
Holley-Mason Hardware Co., Spokane
Chanslor & Lyon Co., Tacoma
Reynolds & Reynolds, Tacoma

West Virginia
Williams Hardware Co., Clarksburg

Wisconsin
Clemens Auto Supply Co., Eau Claire
Andrea & Sons Co., Julius, Milwaukee
Shadolt & Boyd Iron Co., Milwaukee
Tisch Auto Supply Co., Milwaukee
Western Motor Supply Co., Milwaukee

Wyoming
Auto Equipment Co., Casper

CANADA

Alberta
The Motor Car Supply Co.,
of Canada, Ltd., Calgary
The Motor Car Supply Co.,
of Canada, Ltd., Edmonton

British Columbia
Marshall-Wells, B.C., Ltd., Vancouver

Manitoba
Wood, Vallance, Ltd., Winnipeg

New Brunswick
The Lounsbury Company, Ltd.,
Newcastle

Nova Scotia
J. J. Snook Ltd., Truro

Ontario
A. Chown & Co., Ltd., Kingston
A. Workman & Co., Ltd., Ottawa
Hyslop Brothers Ltd., Toronto
Johnston-Deane Ltd., Toronto
Samuel Trees & Co., Ltd., Toronto
Bowman-Anthony Co., Windsor

Saskatchewan
Wood, Vallance, Limited, Regina

FOREIGN

Australia
Duncan & Co., Melbourne
Cornell, Ltd., Adelaide
Chas. Atkins & Co., Ltd., Perth
Canada Cycle & Motor Agency,
Brisbane
Hilson, Lloyd & Co., Sydney

Great Britain and Ireland
A. C. R. Greene & Co., Ltd., London

Japan and Korea
Takemura Company, Yokohama

Jugo-Slavia
William H. Smyth, Belgrade

Mexico
Mexico Auto Supply Co., Mexico City

New South Wales
Hilson, Lloyd & Co., Sydney

New Zealand
Jas. J. Niven & Co., Ltd., Wellington

Norway, Sweden and Denmark
F. Bulow & Co., Copenhagen

Panama
The Torbert Wholesale Rubber
& Accessory Co., Panama City

Spain
Luis R. Villamil, Madrid

Sweden
A. B. Stern & Stern, Stockholm

Union of South Africa
Bartle & Co., Ltd., Johannesburg

Uruguay
Clericetti & Barrella, Montevideo

JOHNS-MANVILLE Inc., 294 Madison Ave., at 41st St., New York City

Branches in 61 Large Cities

For Canada: CANADIAN JOHNS-MANVILLE CO., Ltd., Toronto

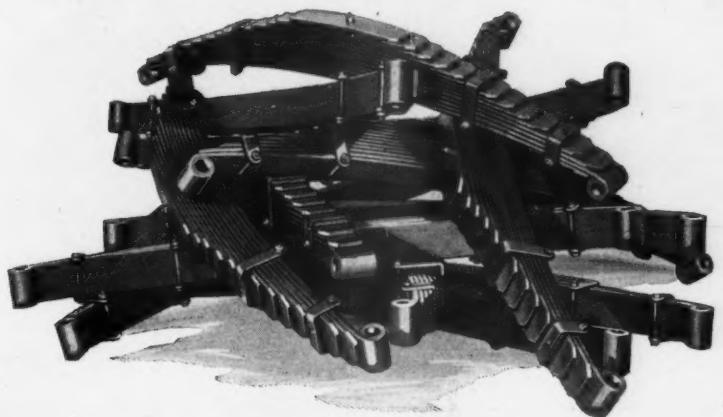


Asbestos
and its allied products

INSULATION
BRAKE LININGS
ROOFINGS
PACKINGS
CEMENTS
FIRE
PREVENTION
PRODUCTS

JOHNS-MANVILLE

Automotive Equipment



THE SPRING IS THE THING

Mather Springs Scientifically Heat Treated

The
Mather Spring Co.
Toledo~Ohio.

**MATHER
SPRINGS**



WEST TOWN MOTOR SERVICE, Chicago, Operates This Fleet of MACKS
All ST. PAUL HYDRAULIC HOIST Equipped

SERVICE

Contractual obligations are founded on confidence in the capacity for faithful fulfillment.

ST. PAUL HOISTS
fulfill their obligations



The BARTNICK SAND & GRAVEL CO.
Depends on ST. PAUL for SERVICE

SATISFACTION

Dependability that permits the delivery and dumping of materials at the time and place specified.

ST. PAUL HOISTS
SATISFY

Specify St. Paul for Service

DISTRIBUTORS and SERVICE STATIONS Everywhere.
Write for Name and Address of One Nearest You

HYDRAULIC HOIST MANUFACTURING CO.

Factories at St. Paul, Minnesota

=St.Paul=
VERTICAL AND UNDERBODY
HYDRAULIC HOISTS



**Certificate Holders for the Quarter
Ending December 31st, 1923**

Albion Malleable Iron Co.	Yonkersville, N. Y.
American Chain Co.	Albion, Mich.
American Malleable Castings Co.	Bridgewater, Conn.
American Malleables Co.	Marion, O.
Baltimore Malleable Iron & Steel Casting Co.	Lancaster, N. Y., and Owosso, Mich.
Budger Malleable & Mfg. Co.	South Milwaukee, Wis.
Baltimore Malleable Iron & Steel Casting Co.	Baltimore, Md.
Belle City Malleable Iron Co.	Racine, Wis.
Chain Belt Co.	Milwaukee, Wis.
Chicago Malleable Castings Co.	West Pullman, Chicago, Ill.
Columbus Malleable Iron Co., The	Johnstown, O.
Davison Malleable Iron Co.	Des Moines, Ia.
Dayton Malleable Iron Co.	Dayton, O., Irwin, O., and Canton, O.
Decatur Malleable Iron Co.	Decatur, Ill.
Davis Mfg. Co., Thomas	Philadelphia, Pa.
Eastern Malleable Iron Co., The	Napagack Malleable Iron Works, Bridgeport, Conn.; Troy Malleable Iron Works, Troy, N. Y.; Wilmington Malleable Iron Works, Wilmington, Del.; Vulcan Iron Works, New Britain, Conn.
Erie Malleable Iron Co.	Erie, Pa.
Federal Malleable Co.	West Allis, Wis.
Fort Pitt Malleable Iron Co.	Pittsburgh, Pa.
Frazer & Jones Co.	Syracuse, N. Y.
General Electric Co.	Erie, Pa.
Glancy Malleable Corporation	Waukesha, Wis.
Illinois Malleable Iron Co.	Chicago, Ill.
Iowa Malleable Iron Co.	Fairfield, Ia.
Kalamazoo Malleable Iron Co.	Kalamazoo, Mich.
Leonia Car Co.	Laconia, N. H.
Lake Erie Malleable Castings Co.	Racine, Wis.
Lake Erie Iron Co.	Indianapolis, Ind.
Marietta Malleable Iron Works	Marietta, Ind.
Moline Malleable Iron Co.	St. Charles, Ill.
National Malleable & Steel Castings Co.	Cleveland, O., Chicago, Ill., Indianapolis, Ind., Toledo, O., St. Louis, Ill., St. Paul, Minn., Milwaukee, Wis., Pittsburgh, Pa., Hillgrove, R. I., Rockford, Ill., Chattanooga, Tenn., St. Louis, Mo., Saginaw, Mich., South Milwaukee, Wis., Benton Harbor, Mich., Rochester, N. Y., Temple, Pa., Terre Haute, Ind., Trenton, N. J., E. Moline, Ill., Hooperston, Ill., Hammond, Ind., Warren, Ohio, Chicago, Ill., Milwaukee, Wis., York, Pa., Zanesville, O.

High Yield Point is what the Engineer Wants

Engineers responsible for the design of machines in which vital parts must withstand shock and abuse freely use Certified Malleables because of their high elastic limit (yield point) compared to other ferrous castings.

Yield point of Certified Malleables is 65% of ultimate strength
Yield point of Steel Castings is 45% of ultimate strength

Certified Malleables all average higher than 50,000 pounds tensile strength with yield point of 33,000 pounds or higher. This is about 6000 pounds or 22% higher than Class A Steel Castings and exceeds by a considerable margin the yield point of medium and soft Class B Steel Castings, having tensile strengths of 70,000 and 60,000 pounds respectively.

Along with their high elastic limit, Certified Malleables machine more easily and economically than other ferrous castings. After annealing, all Certified Malleables contain minute particles of free temper carbon or graphite which serves as a natural lubricant for the cutting tool, while freedom from blow holes and hidden defects prevents "rejects" after expensive machining labor has been expended.

**AMERICAN MALLEABLE CASTINGS ASSOCIATION
UNION TRUST BUILDING
CLEVELAND, OHIO**



CERTIFIED MALLEABLE CASTINGS

SERIAL NUMBERS



**BROWN-LIPE GEAR
SERIAL NUMBERS
—Your Safeguard**

YOU may find the serial numbers sometimes painted over but they are stamped on all Brown-Lipe Gear units as follows:

Unit Power Transmissions—On the forward top side of the case, to left of center and either under or immediately in front of the cover; also on top of the cover near the left edge.

Main Frame Transmissions—On the top surface of the left rear supporting arm; also on top of the cover, near this arm.

Clutches—On top of the left side boss for the release shaft.

Controls—Unit power type, on top of the cover, near center. Main frame type, on edge or top of the bracket.

Never use anything but Genuine parts with Brown-Lipe Gear units.

Service may be obtained from manufacturers using our units, authorized parts service stations or direct from our factory.

BROWN-LIPE
GEAR CO.

BROWN-LIPE GEAR COMPANY
SYRACUSE, N. Y.

San Francisco Chicago Detroit New York London, Eng.



***"These wheels have proved themselves to be
a most satisfactory purchase"***

ISN'T it gratifying when your suggestion that a certain important purchase be made, receives the approval of your associates, and then the article itself proves both its worth and your good judgment by giving satisfactory, year-after-year service?

Dayton Steel Wheels are daily proving their worth by rendering exacting service under the most adverse conditions. They increase the life of motor trucks because they are built to bear the brunt of heavy loads and absorb the shocks of bad roads.

The exclusive hollow-arch construction of Dayton Steel Wheels combines enduring strength with light weight.

Destructive road heat is quickly dissipated—tire life is prolonged. The Dayton Wheel is a bulwark of protection to the unsprung parts of a truck which are spared much destructive wear and tear.

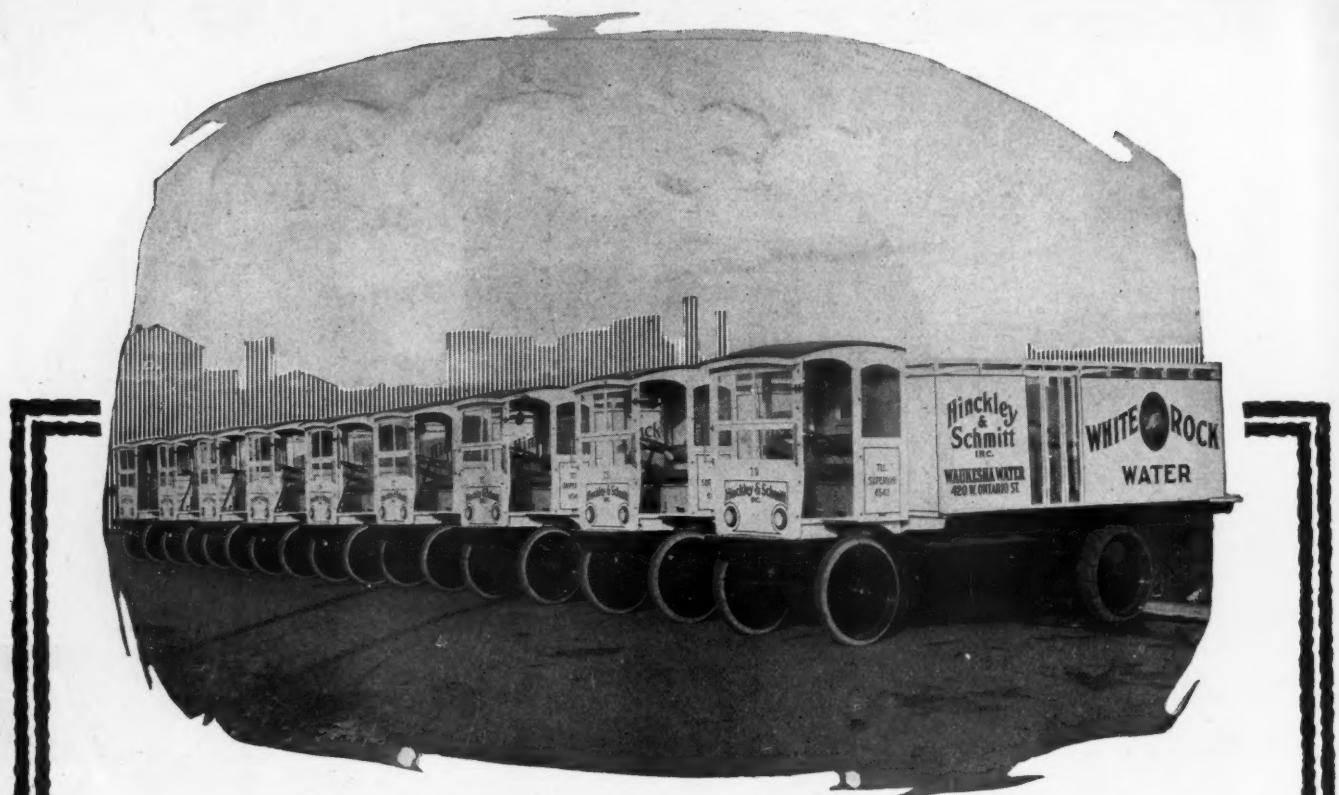
A truck is no better than its wheels. Don't overlook the importance of selecting the right wheels for your trucks. Specify once and wisely. For Strength, Light Weight, Tire Economy, Durability, Accessibility and Pleasing Appearance, specify Dayton Steel Wheels.

*Built for solid and pneumatic
tires and for any standard
type front or rear axle.*

**The Dayton Steel Foundry Co.
Dayton, Ohio**

Dayton

Steel Truck Wheels



"Quality in a motor truck begins in the raw materials, it shows itself in the policies and practices of him who is engaged in their fabrication, it is apparent in the methods of him who offers the completed machine for sale, it is again perceptible in the type of man who buys it, and lastly, but most important of all, in the account it gives of itself in service. At no step in the procession from raw material to functioning machine can the ideals of quality be sacrificed or compromised without detracting to just that extent from the efficiency of performance expected from the finished product. Whatever of cheapness enters into it must make itself apparent at some later point and, like a cancerous growth, spread its tentacles in every direction. Buyers of cheap motor trucks have learned a great lesson and their conclusions are manifesting themselves in their later purchases, the great bulk of which are being made from known makers of quality products."

Repr. Power Wagon Dec. '23.

The Walker Vehicle Company, since its inception, has insisted consistently that quality, long life, superior performance and LOWEST EVENTUAL cost must never be sacrificed for low first cost. Leading American concerns with millions invested in Walker Electric Trucks have found that results unquestionably justify this policy.

WALKER VEHICLE COMPANY, Chicago LEADING MANUFACTURER OF ELECTRIC STREET TRUCKS

New York

Boston

Philadelphia

Buffalo

Newark

Atlanta

New Orleans

Dealers in Other Principal Cities

Load Capacities:— $\frac{1}{2}$ — $\frac{3}{4}$ —1—2— $3\frac{1}{2}$ —5 tons

WALKER ELECTRIC TRUCKS

LOWEST TRUCKING COST ON CITY ROUTES



The daily job of a tire valve

MOTOR trucks rumble everywhere. Over the roughest of roads they move swiftly from place to place on cushions of air.

The life of giant pneumatic tires is shortened and their cushioning power weakened if that cushion of air is not constantly kept at the proper pressure. The responsibility for holding in this air rests largely *on the truck tire valve*.

Schrader Valves for heavy duty

Schrader Truck Tire Valves have always successfully held air in pneumatic truck tires. They were on the first of those tires made. Wherever pneumatic tires are in use today, you will find Schrader Tire Valves holding air in them. They are standard on pneumatic truck tires made in the United States and Canada.

Schrader Truck Tire Valves are the work of skilled engineers who

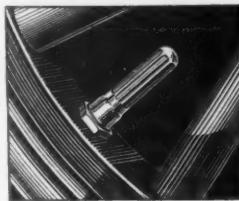
can call upon the experience of an organization which has for many years been making air-tight valves. Care in manufacture, rigid tests, and inspection of every valve and of all its parts insure the production of a complete valve that performs its work unfailingly.

Use the complete valve

On all your pneumatic truck tires always use complete Schrader Truck Tire Valves. That means using Valve Caps, Rim Nuts and Dust Caps. Only then will your valves continue to do their necessary work of retaining air.

Be sure also that you use No. 4000 Schrader Valve Insides if it becomes necessary to replace your present valve insides.

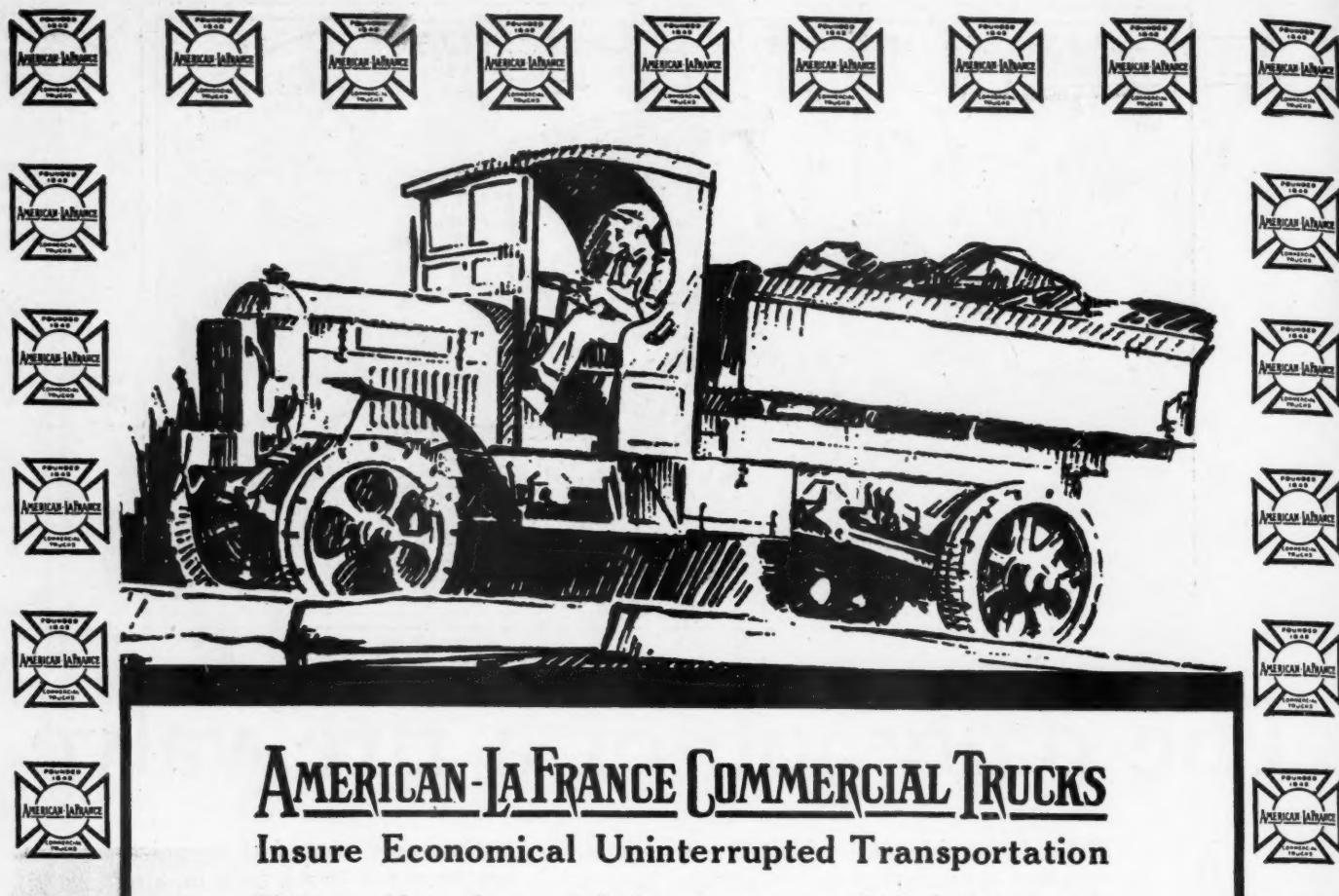
You can get a complete stock of Schrader Truck Tire Valve Parts from your regular supply house.



Complete Schrader Tire Valve with Dust Cap as it appears on tires in actual service.

A. SCHRADER'S SON, Inc., Brooklyn, N. Y.
CHICAGO TORONTO LONDON

Schrader
Makers of Pneumatic Valves Since 1844
Tire Valves • Tire Gauges



AMERICAN-LAFRANCE COMMERCIAL TRUCKS

Insure Economical Uninterrupted Transportation

Written evidence from satisfied users proves conclusively that American-LaFrance Commercial Trucks are daily giving satisfactory service. We shall appreciate an opportunity to submit this evidence.

One reason for the successful performance of American-LaFrance Commercial Trucks

Dry Plate Clutch with Self Aligning Pressure Plate

The driver of an American-LaFrance Commercial Truck is never troubled by a slipping clutch. This is assured by the patented self-aligning pressure plate which forces the engaging spring to exert an equal pressure on all parts of the clutch discs. Adjustment of the spring pressure can be made without removing any part of the assembly. Our experience in designing fire apparatus wherein 250 Horse Power must be transmitted has enabled us to work out this clutch for the benefit of American-LaFrance Commercial Truck users.

DEALERS

A few territories are open to responsible dealers. We can offer an unusually attractive proposition.

AMERICAN-LAFRANCE FIRE ENGINE COMPANY, INC.

COMMERCIAL TRUCK FACTORY

BLOOMFIELD, N. J.

FIRE APPARATUS FACTORY, ELMIRA, N. Y.

NEW YORK OFFICE

FISK BLDG., BROADWAY AT 57TH ST.

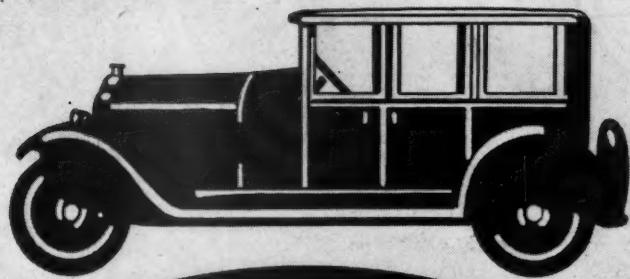


MARCH 15, 1924

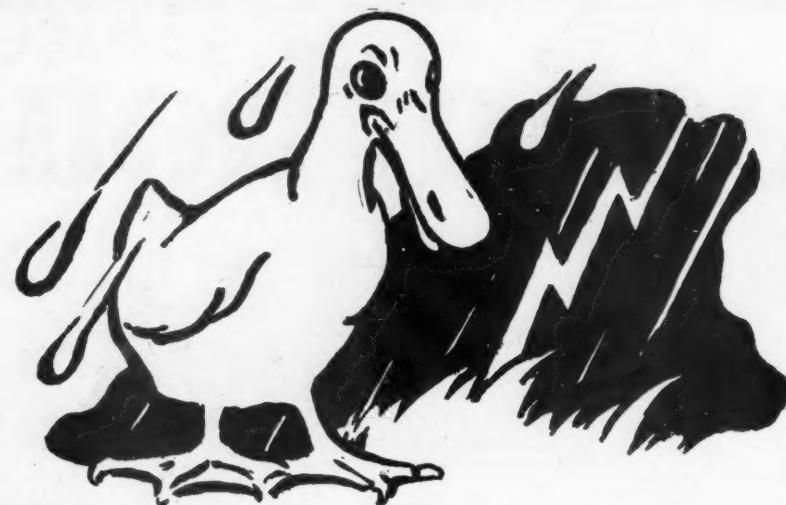
THE COMMERCIAL CAR JOURNAL

77

Westinghouse



The Sign of the Westinghouse Service Station



Without the rain life couldn't go on

WITHOUT sparks, your motor couldn't start, your truck couldn't budge and your business would be at a standstill with interest on your investment piling higher and higher.

The New Model SS Splitdorf Magneto — a self-contained unit for ignition only, an instrument that is always on the job—insures for any car, truck, bus, taxi or tractor:

Easiest possible starting at lowest cranking speeds;

A hot, fat, sizzling, never-failing spark that just consumes the mixture and minimizes carbon deposit; and

Absolute protection against all oil, dust, grease and natural accumulations found with the best kept motors.

In other words the Splitdorf SS Magneto is an instrument of power, performance, operation economy

and dependability that MUST give satisfaction under every working condition.

SPLITDORF ELECTRICAL COMPANY

Newark, N. J., U. S. A.



Manufacturers of dependable ignition equipment for cars, trucks, buses, taxis and tractors. Makers also of Green Jacket Spark Plugs.



The United Constructor



An open road to profits

Thirty States Are Spending \$265,721,000 on New Roads

Figures on highway construction contracts in the different states show amounts ranging from \$1,218,000 to \$37,497,000. States listing \$1,000,000 or more each of highway betterment contracts are:

North Carolina.....	\$37,497,000
Ohio.....	30,000,000
Missouri.....	29,233,000
Illinois.....	23,400,000
West Virginia.....	15,000,000
Michigan.....	13,836,000
Pennsylvania.....	12,259,000
Iowa.....	9,000,000
Wisconsin.....	9,000,000
Alabama.....	8,584,000
Maine.....	8,500,000
New Jersey.....	8,500,000
Colorado.....	8,345,000
South Carolina.....	6,023,000
Mississippi.....	6,000,000
Wyoming.....	4,900,000
Maryland.....	4,265,000
Washington.....	3,000,000
Delaware.....	2,800,000
Idaho.....	2,175,000
Louisiana.....	2,000,000
North Dakota.....	1,800,000
Massachusetts.....	1,358,000
California.....	1,343,000
Oregon.....	1,335,000
Arizona.....	1,270,000
Nebraska.....	1,218,000
Minnesota.....	1,200,000
Kentucky.....	1,000,000
Utah.....	1,000,000

Thousands of trucks, especially designed for road construction work, will be needed this year to put through this "New Roads" program in the different states.

THE UNITED CONSTRUCTOR was built to help meet this demand. Each detail of chassis and body was designed with the one idea of producing a truck that would answer every requirement of speed and dependability and that would be always "on the job."

United dealers will share largely in the opportunities for profits which this field will open up.

We want you to be one of them.

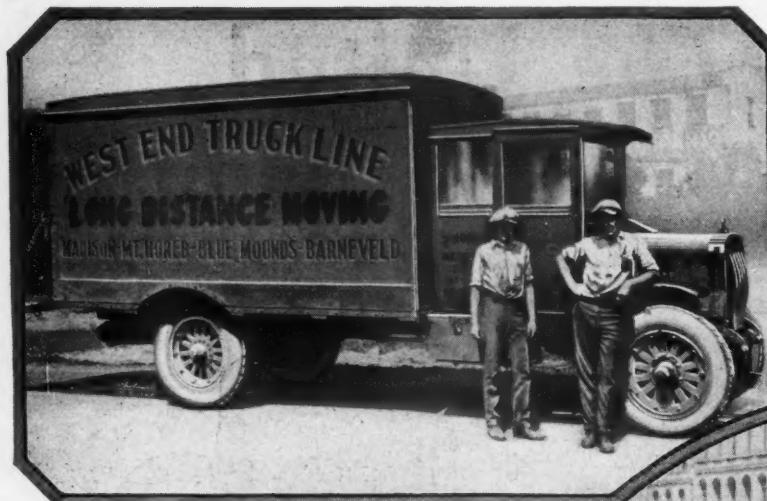
Write us for full information that will tell you how.

United Motors Products Co.

Grand Rapids, Michigan

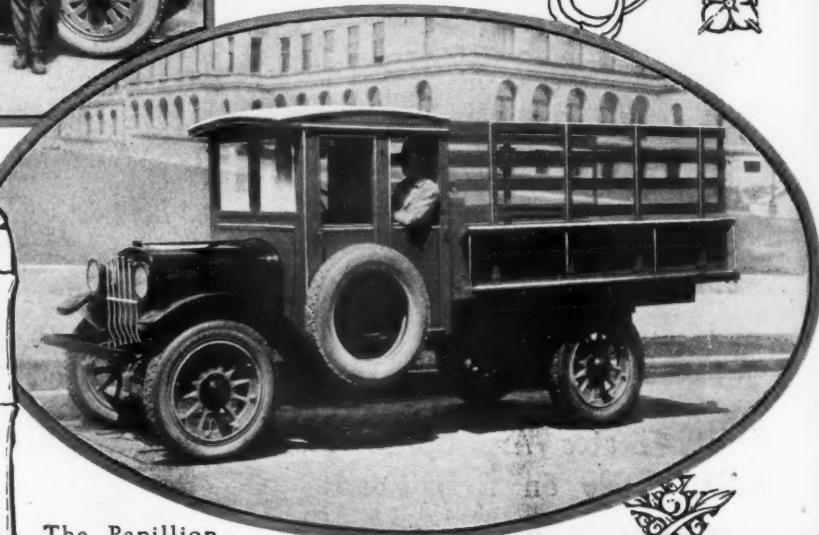


A fleet of United Constructors that proved a profitable investment for J. C. O'Connor & Sons, Fort Wayne, Ind., during the past season



Another example of real tire worth — this 100% General equipped truck of the West End Truck Line, of Madison, Wis. Front and rear tires are all General Cords.

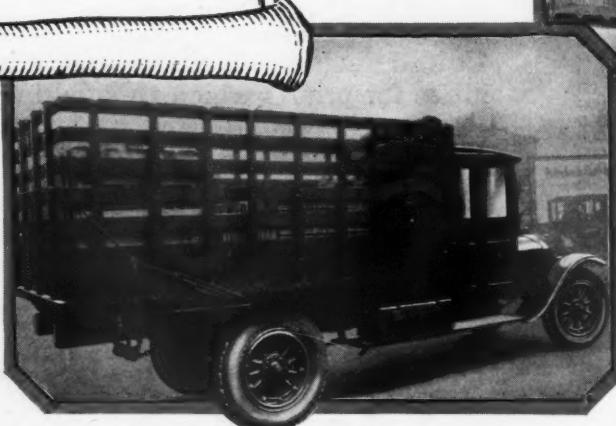
—goes a long way to make friends



The Papillion Transfer Company uses this truck for hauling milk and stock between Papillion and Omaha, Neb. Mr. Brownley, the owner, insisted on General Cord equipment when he ordered the truck.



Notice the overhang on this big delivery truck, one of three owned and operated by the Manufacturers' Warehouse Company at Greenville, S. C. All ride on Generals exclusively.



It takes a mighty good tire to stand up under the loads this truck hauls. It's owned and operated by the Union Transfer Company, of Omaha, Neb., and is 100% General Cord equipped.

The

GENERAL CORD

BUILT IN AKRON, OHIO, BY THE GENERAL TIRE AND RUBBER COMPANY

GREATER COMFORT—GREATER SPEED—GREATER SAFETY—GREATER PROFITS

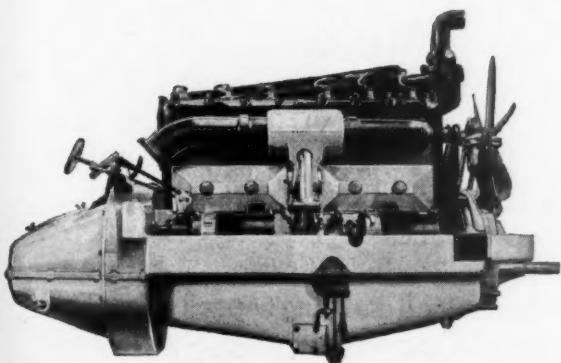
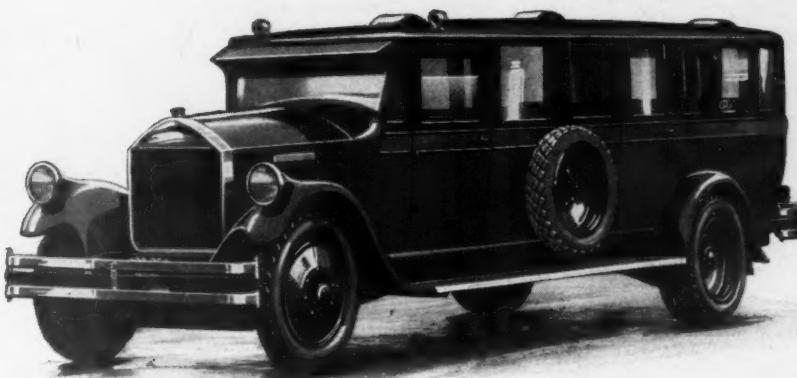
Who will sell all the Pierce-Arrow Busses that can be placed in your territory?

Standard Chassis

\$4600

for 196-inch wheelbase,
\$4750 for 220-inch
wheelbase, at Buffalo. In-
cluding starter, battery,
generator, solid tires
and electric lights. Pneu-
matic tires and disc
wheels optional at extra
cost.

Terms if desired



The Pierce-Arrow 6-Cylinder Bus Engine

The silent Dual-Valve, Dual-Ignition Pierce-Arrow Bus Engine develops over 100 horsepower at 2500 revolutions per minute.

It is so flexible that gear-shifting is reduced to a minimum. Speed of from 45 to 50 miles an hour can be maintained easily, if desired. In congested traffic, the engine will throttle down to an unusually slow pace in high gear and will accelerate powerfully.

The bus is propelled by a trouble-free inverted worm gear drive. The low-hung chassis has an unusually short turning radius.

We will gladly arrange for a complete demonstration of the Pierce-Arrow Motor Bus at the factory.

The development of the modern Pierce-Arrow Motor Bus has opened up an almost unbelievably rich sales field. The list of users is a long one—city and interurban bus lines, railway transfer lines, private schools, resort hotels, camps, country clubs, sight-seeing lines, real estate developments. All these and many more demand rapid, safe, economical and comfortable transportation.

Pierce-Arrow has developed an ideal bus to meet this demand. It is a saleable bus—for its performance is beyond anything previously made; its price is attractive, and it may be paid for on liberal terms through the Pierce-Arrow Finance Corporation.

Investigate the possibilities of obtaining the valuable Pierce-Arrow franchise in your territory. Write us for details.

The Pierce-Arrow Motor Bus chassis, produced in two lengths of wheelbase, will accommodate the de luxe sight-seeing or pay-enter types of wood or steel bodies, ranging from 18-passenger capacity upward.

THE PIERCE-ARROW MOTOR CAR COMPANY
Buffalo, N. Y.

Pierce-Arrow

CAPACITY



*The
New Series*

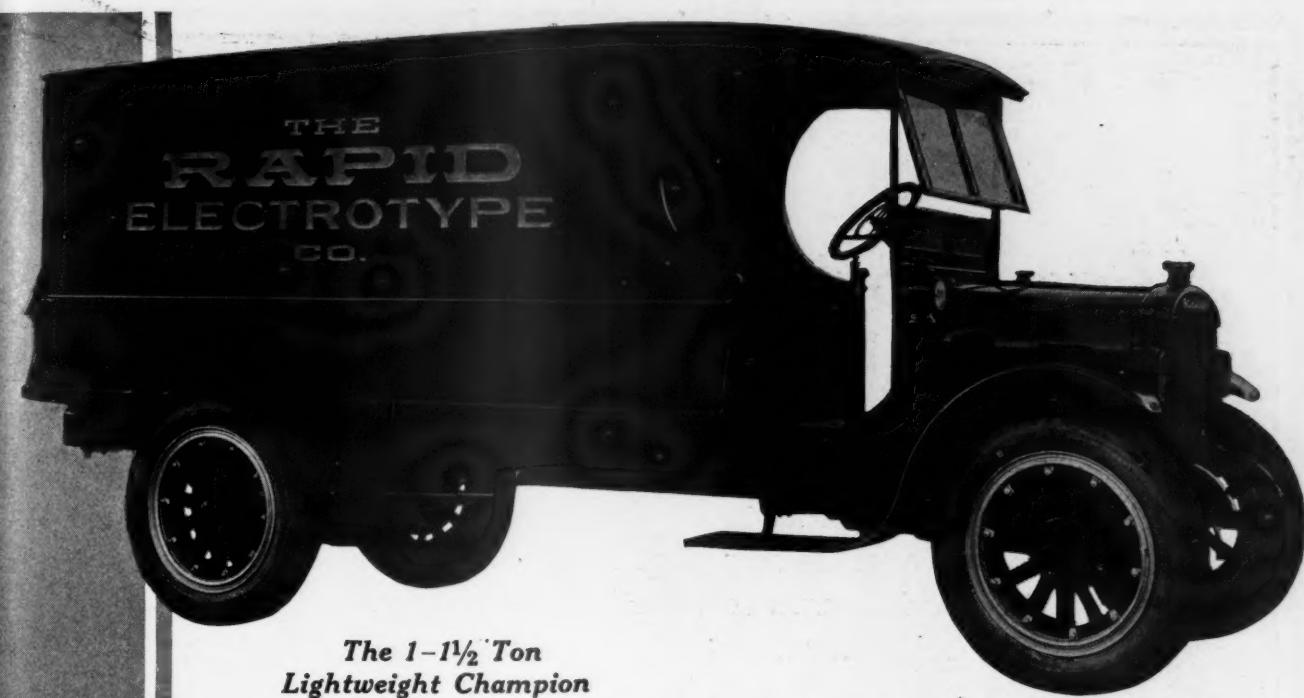
HYATT
Quiet
Roller Bearings

THE improved motor truck of today calls for improved bearings. To meet present day driving conditions bearings must have ample capacity for—

carrying heavy loads continuously,
operating at high speeds,
absorbing shocks on rough roads,
sustaining overloads to which many trucks are so frequently subjected.

Hyatt New Series Bearings have large carrying capacity designed into them to meet these very conditions. The greatest possible number of rollers in a given diameter secures the greatest possible bearing capacity. Hyatt New Series Bearings, therefore, assure maximum load carrying capacity for those trucks that are equipped with them.

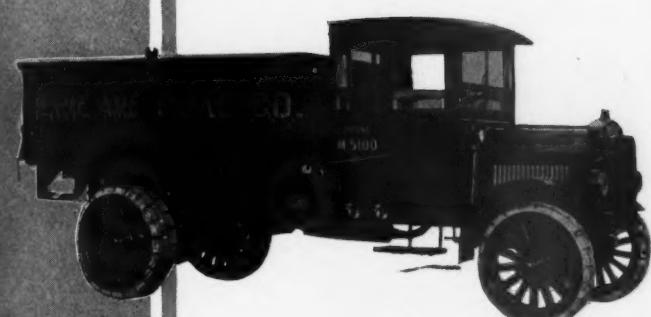
Hyatt Roller Bearing Company
Newark Detroit Chicago San Francisco
Worcester Milwaukee Huntington, W. Va. Minneapolis
Philadelphia Cleveland Pittsburgh Buffalo
Indianapolis



*The 1-1/2 Ton
Lightweight Champion*



3 Ton Ten-Speed



4 Ton Ten-Speed

PROSPECTS EVERYWHERE!

—every business with a transportation problem can be suited with a SCHACHT. There is a size for every hauling need. Dealers with the SCHACHT franchise can go anywhere for business, unhampered by the usual limitations.

Schacht Trucks in the "Lightweight Champions"—the one-ton and one-and-a-half-ton models—set the pace for performance in their class exactly as the TEN-SPEED SCHACHTS lead the way in heavy-duty work. Schacht Trucks are made in 1, 1½, 2, 2½, 3, 4, 5 and 7 ton sizes.

Schacht dealers sell transportation in its highest development. They are solid, substantial business men who earn substantial profits and expect to stay in business. They receive complete co-operation from the factory.

The Schacht franchise for your territory may be open.

Write or Wire Today for the Details

The G. A. Schacht Motor Truck Co.
Eighth and Evans Streets, Cincinnati, Ohio

NEW YORK BRANCH:
220-228 Thirteenth Street, Long Island City

SCHACHT Ten Speed TRUCKS

What Two Months Have Shown Garford Distributors About 1924 Profits

In spite of the big increase in sales Garford Distributors enjoyed in 1923, the two past months have shown conclusively that 1924 will far out shadow the previous twelve months in the volume of business being done.

On the sound foundation of many years' practical experience in building trucks to the highest standard of quality, Garford is prepared for new achievements in motor truck construction which will stimulate sales to a record high point.

For the forward-looking man, capable of handling a full line of trucks, there is no selling plan that affords better opportunity than the one Garford is prepared to make.

An alliance with Garford at this time is a matter well worth investigation and considering seriously.

May we give you detailed information in confidence? Write or wire our factory.

The Garford Motor Truck Company, Lima, Ohio

Manufacturers of Motor Trucks, 1 to 7½ tons.

GARFORD
DEPENDABLE TRANSPORTATION

more enduring
than steel

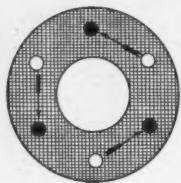
Thermoid Hardy Universal Joint

*Outwears metal
absorbs jolts
requires no oil
or care*

*The twist ruined
the shaft -- but
the joint held*



The diagram below shows the construction of the ordinary fabric universal joint. The black holes indicate the driving bolts, the white are the driven. Only the left-hand driving bolt pulls in the direction of the strands. The other two must pull on the bias. Contrast this with the extra strength made possible by the Thermoid-Hardy's fan-wise construction.



Waste or selvage edges

21,700 Inch-Pounds of Twist Failed to Strain the Fabric

THAT a Thermoid-Hardy Joint will outlast a metal universal has been proven time and again by the long list of manufacturers who equip with Thermoid-Hardy.

But it remained for the Engineering Department of Purdue University to prove the endurance of a Thermoid-Hardy Joint as compared with a 2-inch, ten-gauge steel driving shaft.

The illustration (see preceding page) was made from a photograph. That picture shows what the steel shaft looked like after a 21,700 inch-pound twist. The Thermoid-Hardy Joints used in this experiment were not even strained.

From then on, we were sure that the "fan-wise" construction of the Thermoid-Hardy Joint was *right*.

What do you think is a good test of universal joint performance. Won't you make that test using a Thermoid-Hardy in comparison with any other joint on the market?

THERMOID RUBBER COMPANY, Trenton, N. J.

New York, Chicago, Los Angeles, Detroit, Atlanta, Seattle, Kansas City,
Boston, San Francisco, Cleveland, London, Paris, Turin

Makers of Thermoid Brake Lining, Thermoid Tires, Rexoid Transmission Lining

Some Thermoid-Hardy Users

Allis Chalmers Mfg. Co.
American Bosch Magneto Co.
American Motors Corp.
Anderson Motor Co.
The Autocar Co.
Available Truck Co.
Barley Motor Car Co. (Roamer)
Bartlett Motor Truck Co.
Chandler Motor Car Co.
Cleveland Automobile Co.
Continental Motor Co.
Cooks Motor Corp.
Cowan Truck Co.
Crow-Elkhart Motor Corp.
Jas. Cunningham Son & Co.
Curtiss Aeroplane & Motor Co.
Dart Truck & Tractor Corp.
Day-Elder Motor Co.
Diamond T Motor Car Co.
Doane Motor Truck Co.
Dort Motor Car Co.
H. H. Franklin Mfg. Co.
Garford Motor Truck Co.
Gramm-Bernstein Motor Truck Co.
Hatfield-Penfield Steel Co.
Hawkeye Truck Co.
Haynes Automobile Co.
Hendrickson Motor Truck Co.
Holt Mfg. Co.
Indiana Truck Co.
International Harvester Co., of A., Inc.
International Motor Co.
Jordan Motor Car Co.
Jordan Motor Car Co.
Keller-Springfield Motor Truck Co.
Kentucky Wagon Mfg. Co., Inc.
Kissel Motor Car Co.
Locomobile Co.
Maxwell Motors Corp.
McFarlan Motor Car Co.
Mercer Motors Co.
Moreland Motor Truck Co.
Nelson & LeMoore
E. A. Nelson Automobile Co.
O'Connell Motor Truck Co.
Olds Motor Works
Packard Motor Car Co.
Parker Motor Truck Co.
Patriot Motors Co.
Pierce-Arrow Motor Car Co.
Reo Motor Car Co.
Republic Motor Truck Co.
Rochester Motor Corp.
Rock & Sun Devorot Eng. Co.
Sanford Motor Truck Co.
Stewart Motor Corp.
Stoughton Wagon Co.
Studebaker Corp.
Superior Products Mfg. Co.
Traffic Motor Truck Co.
Transport Truck Co.
United Motors Co.
Velle Motor Corp.
Walter Motor Truck Co.
Wilcox Trux Co.
Willys-Overland, Inc.
Worthington Pump & Machinery Corp.
Yellow Cab Co.

Thermoid-Hardy Universal Joint

MEAD-MORRISON



**Saves Time and Labor
on Any Hauling Job**



Mead-Morrison Motor Truck Winch Hauling
30 Ton Boiler, Tonawanda, N. Y.

MOTOR TRUCK WINCH

HERE'S a quick, easy way to handle a heavy rigging job. One man at the winch—and a big boiler going on rollers up the incline. Progressive motor truck owners are getting larger earnings from their trucks by installing Mead-Morrison Motor Truck Winches. They use the idling power of the engine for loading, unloading, hoisting, hauling. The winch saves the wages of extra hands and speeds up the day's work.

Seven types of drum and capstan winches—one for each class of service. Our system of national distribution assures immediate attention to your needs. Write for full information.

**MEAD-MORRISON
MANUFACTURING COMPANY
322 PRESCOTT ST. EAST BOSTON, MASS.**

*Steam, Gasoline and
Electric Hoists*

Electric Car Pullers

Grab Buckets

*Truck Winches in
Capstan and Drum Models*

Motor Truck Cranes

**Multiplies Man-Power
HOISTING - HAULING - HANDLING**



This Letter Speaks for Itself—Loudly!

The Pantasote Company, Inc. San Francisco, December 15, 1923.
11 Broadway, New York City

Gentlemen: VEHISOTE we have found to be all that you claim for it and then more than that.

VEHISOTE--after building a whole fleet of bodies for the Old Homestead Bakery, Inc., of San Francisco--has lived up to and beyond all expectations for wear, and the finish effect after painting produces the best possible job.

VEHISOTE has another advantage, which is--after an accident it is so easy to repair a hole in the body at so slight an expense that neither the owner nor the insurance company has any possible kick.

VEHISOTE and the other members of the "Sote" family will be used and recommended in our shops.

VEHISOTE calls for this unsolicited testimonial because it has given us all-around satisfaction.

Yours truly,
NUGENT-COVEY WAGON COMPANY
(Signed) Richard Nugent

Little remains for us to say about the merits of

TRADE VEHISOTE MARK
(Wood-Fibre) PANELS

....except that Mr. Nugent's high opinion of this splendid Panel Material simply echoes the attitude of practically all the other leading high-class Body Builders, as well as many of the foremost industrial concerns, of America.

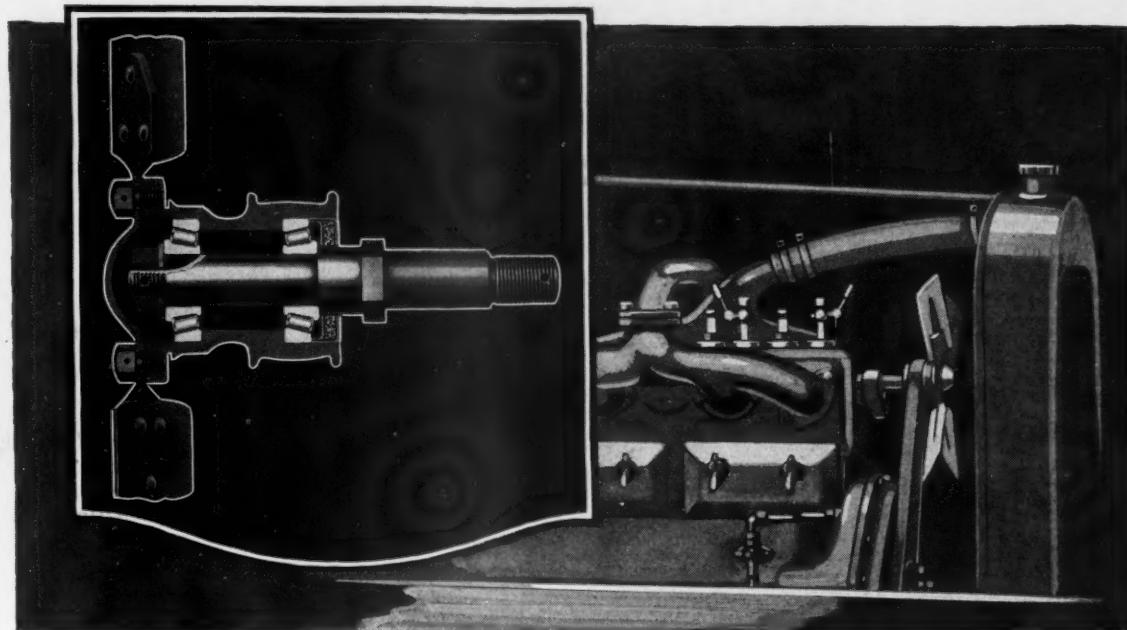
A "Better" Body Pays

THE PANTASOTE COMPANY, Inc.

CHICAGO
Peoples Gas Bldg.

NEW YORK
11 Broadway

DETROIT
1446 Penobscot Bldg.



137,760,000 Revolutions—.002 Total Wear Divided Between Two Bearings

"An 18" fan properly housed, belted to an electric motor, was driven 2050 R. P. M. continuously for 137,760,000 revolutions, equalling in car mileage 45,000 miles. The bearings were then removed and examined. There was .0015 wear on the forward bearing—.0005 wear on the rear bearing—a total of .002; in fact, not sufficient wear to require adjustment—the grinding marks were not even worn off the cup, cone or

roll surfaces. The wear was determined by measuring the distance from the front face of cone to the back face of cup before and after tests. Before beginning the tests, hubs were packed with grease and no further lubricant was required."

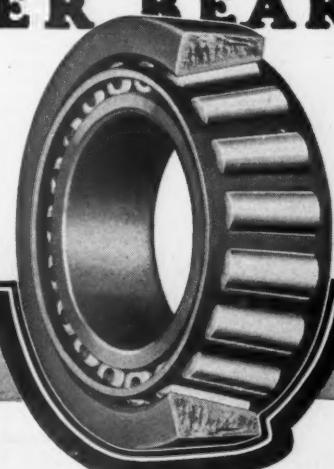
This test should tell an interesting story to any automotive engineer who is working toward an improved fan mounting. We will be glad to send blue prints and supply additional information.

THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO

TIMKEN *Tapered* ROLLER BEARINGS

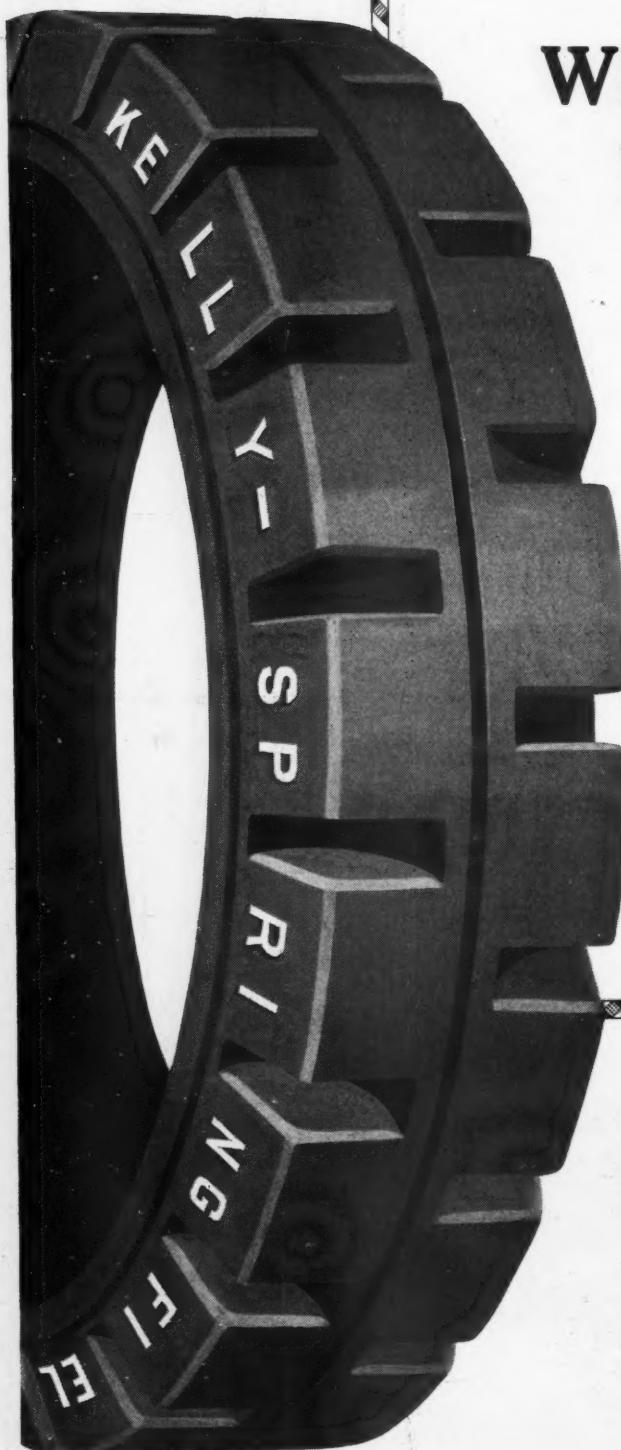
PRINCIPLE

The Timken dual duty capacity to take, in one bearing, both radial loads and thrust loads, makes Timken Tapered Roller Bearings particularly desirable at front wheels, steering pivots and worm, transmission, pinion, differential and rear wheels. They save repair bills.



PERFORMANCE

For twenty-five years, engineers have approved Timken durability, economy and trouble-free performance. One hundred million Timken Bearings have been manufactured. Only the Timken basic principle plus Timken cooperation has made this performance possible.



Why the Kelly Kat is the leading truck tire

The cog-like tread of the Kelly Kat offers powerful resistance to skid, spin, side-slip or loss of traction.

The side notches in the Kelly Kat allow the rubber to flow under load and provide extraordinary cushioning.

The tough, resilient rubber used in the Kelly Kat and the absence of a traction wave assure long mileage and low cost per mile.

The fact that the Kelly Kat is the only truck tire which combines *all* these qualities to a marked degree has enabled it to become the leader in its field and to retain its leadership in spite of imitations.

**There are no Caterpillar
tires but Kelly Kats**

KELLY-SPRINGFIELD TIRE COMPANY
250 West 57th Street New York, N. Y.



An improved
truck A com-
plete line A
great name
Progress!



REPUBLIC

Yellow Chassis

Trucks

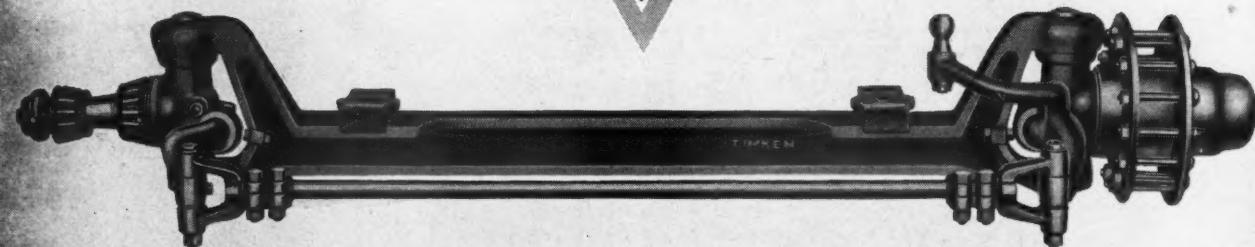


TIMKEN

Practically all truck fronts now embody ideas originated by Timken—in general contour, dimensions, knuckle design and steering connections.

But only Timken can add that which makes a truck front axle a Timken. Ask any Timken-Detroit customer.

THE TIMKEN-DETROIT
AXLE COMPANY
Detroit, Michigan



AXLES

Leave it to Lyman — They Give Satisfaction!

Traffic

BELL
MAIN 322

Columbian Steel Tank Co.
Kansas City, Mo.

Gentlemen:

LYMAN MOTOR COMPANY

Motor Trucks

671 North Fourth Street
Columbus, Ohio

12-26-23

SIGNAL

SALES
SERVICE

We are pleased to state that we have sold a great number of Columbian Lightning Hand Hoists in this territory, and every one of them are giving perfect satisfaction. Part of these hoists are installed on Traffic Trucks, others are on Pierce Arrows, Republics, Sterlings and other makes of trucks.

We are especially sold on the type C Hoist, as it only requires eight inches of mounting space, thereby allowing the regular body length on a short wheelbase truck.

AFL:BL.

Very truly yours,
A. T. Lyman
Lyman Motor Company
Manager.

WHEN the truck dealer sells equipment, it represents him just as much as the truck he sells. It pays him to handle the right kind.

It must sell; but it must STAY SOLD!

The Lyman Motor Company of Columbus knows the Columbian Lightning Hand Hoist does both.

Read their statement of their experience with this hoist, and then sit down and write today for the liberal terms of our proposition. You may have a dump job to quote on tomorrow.

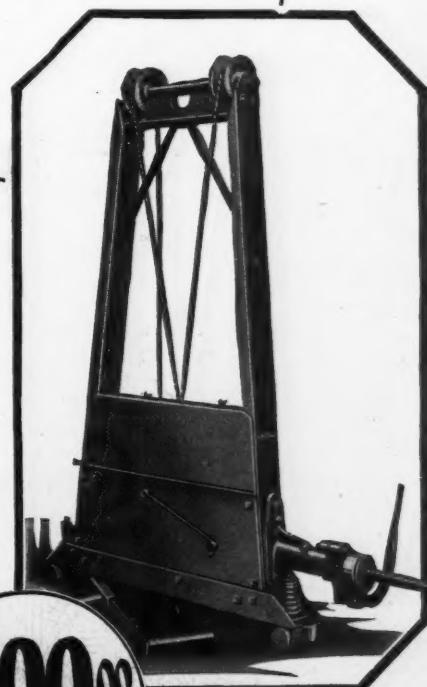
COLUMBIAN STEEL TANK COMPANY
1607 West 12th Street

Kansas City, U. S. A.

COLUMBIA
Lightning Hand Hoists

\$100.00
F.O.B.
KANSAS CITY

CAPACITY
5 TONS
OR MORE



Dump Bodies; Steel Commercial Bodies; Truck Tanks; Under-ground Tanks; Pumps; Barrels; Buckets; Funnels; Carrying Cans; Portable Buildings; Plates; Sheets; Angles, Etc.

VOLTAGE REGULATION

*An OUTSTANDING IMPROVEMENT
in MOTOR BUS LIGHTING*

Voltage Regulation is the *modern* electrical generating system for the modern motor bus.

The Leece-Neville system of Voltage Regulation has been adopted as the standard of the foremost bus and motor rail car builders.

Voltage Regulation gives the motor bus a wide range of operating advantages. It is simple, automatic and trouble-proof. It greatly increases the earning capacity of a motor bus.

Write for Our Booklet "Voltage Regulation"

LEECE-NEVILLE ELECTRICAL SYSTEMS ARE
FURNISHED ON THE PRODUCTS OF

The White Company

J. G. Brill Car Company

Mack International Motor Truck Corporation

The Autocar Company

Brockway Motor Truck Co.

Haynes Automobile Company, and several others



The
LEECE-NEVILLE
Company
CLEVELAND, OHIO

LEECE-NEVILLE



Now Overland Sets a New Economy Standard in Delivery Cars

A new standardized delivery car in one complete quality unit—all-Overland—reducing operating and upkeep costs so low that all past notions of delivery economies seem high by comparison.

The closer check you keep upon your delivery expense, the more amazed you will be by the big savings you net in the use of the Overland Spad—singly or in fleets.

Gould Business Reports and the records of owners show an astonishingly low cost per ton mile. You owe it to your business, your bank balance and yourself to give your delivery service the benefits of Overland Spad reliability and economy. And the greater benefits in appearance. The Overland Spad helps bring in business while delivering your merchandise.

New body types designed by Overland fit every business need as accurately as they fit the strong, dependable Overland commercial chassis. Bodies built of tough ash, oak and maple! Strapped and paneled in steel! Braced like a man-o'-war and cradled against bumps and jars by Triplex Springs (Patented). Two express bodies, two panel bodies—with combinations and variations equivalent to 16 models!

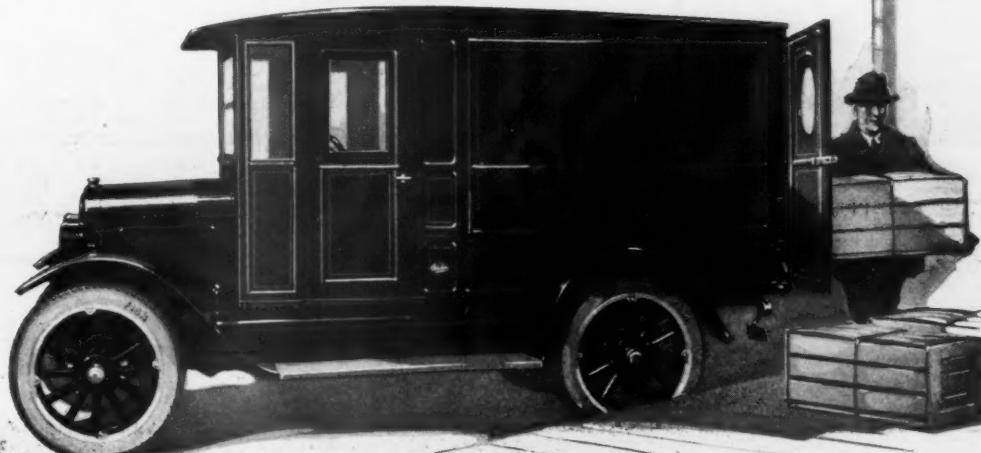
Easy access for the driver from both sides. Clear vision in all four directions. Full protection from the weather. Comfort!

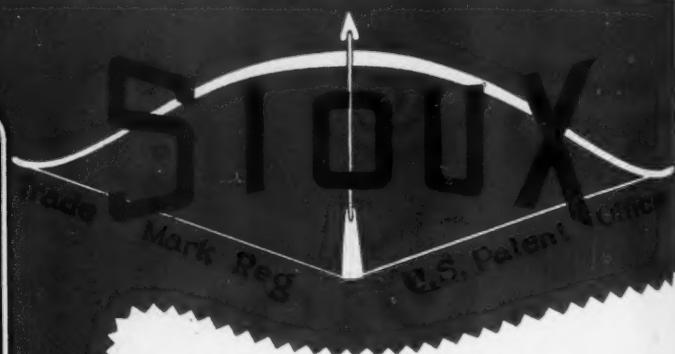
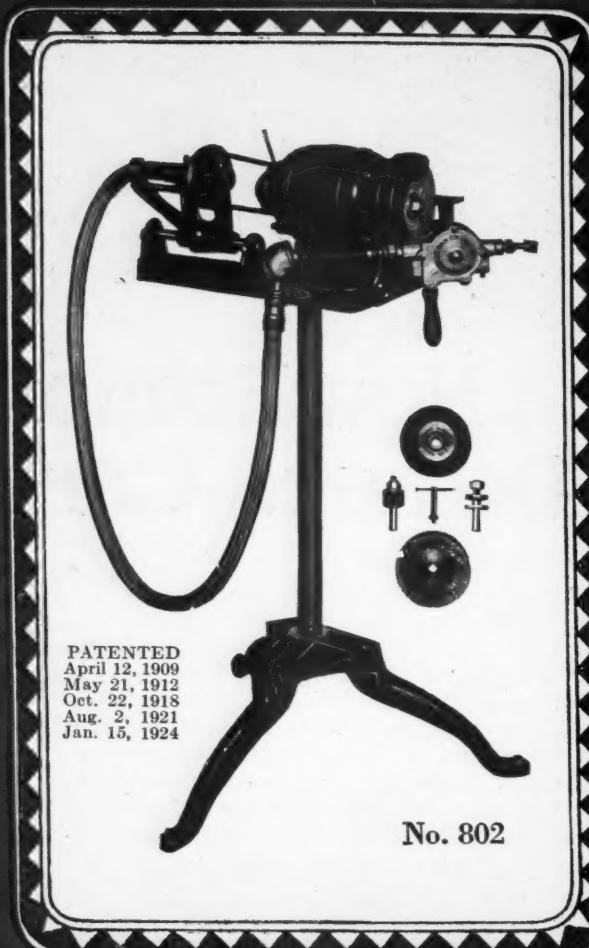
Big mileage and long, long life of reliable service. Big power. The bigger, more powerful Overland engine is exceedingly light on gasoline and oil, and on tires. The Overland Spad is built to earn good-will and save good money!

Overland Chassis \$395; Spad No. 10 (Open express body) \$523; Combination No. 15 (Express body with vestibule cab) \$542; Combination No. 20 (Closed panel body, open cab) \$542; Combination No. 25 (Closed panel body, vestibule cab) \$558; all prices at Toledo, bodies mounted. Unmounted, knocked down and crated, deduct \$5 each price. We reserve the right to change prices and specifications without notice.

Willys-Overland, Inc., Toledo, Ohio

Willys-Overland Sales Co. Ltd., Toronto, Canada





Save Time and Labor—Increase Profits

EVERY job of valve lapping, drilling, reaming, polishing, and carbon removing can be done *better*, quicker and at smaller labor cost, with the Sioux Flexible Shaft and Attachments. It takes the power to the job—exactly where you want it.

For Valve Lapping

it is especially handy and efficient. The 3-speed pulley provides the correct speed, low for large valves, higher for smaller valves. The clutch enables you stop and start at will.

For Emery Wheel Grinding you can take the emery wheel to the work and get in to otherwise inaccessible places. Especially handy in welding work for smoothing out the weld.

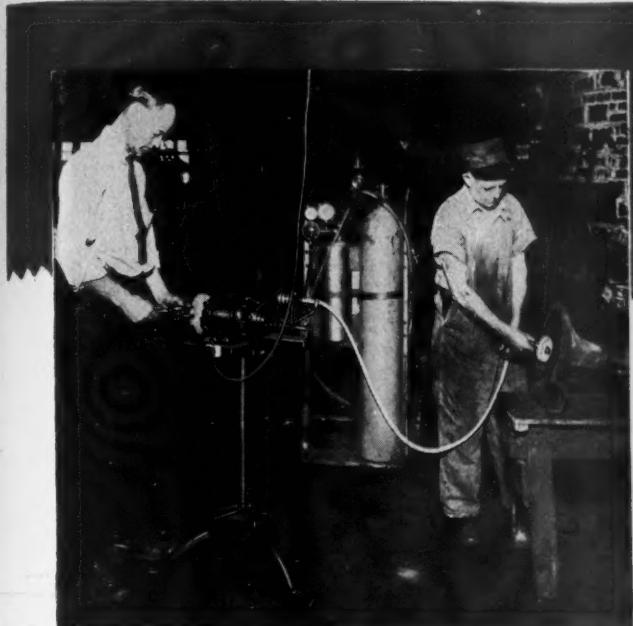
Special Feature. A 6 in. x $\frac{1}{2}$ in. emery wheel—equipped with guard and tool rest—permanently attached to the motor for grinding tools and other small parts.

Write For Full Information

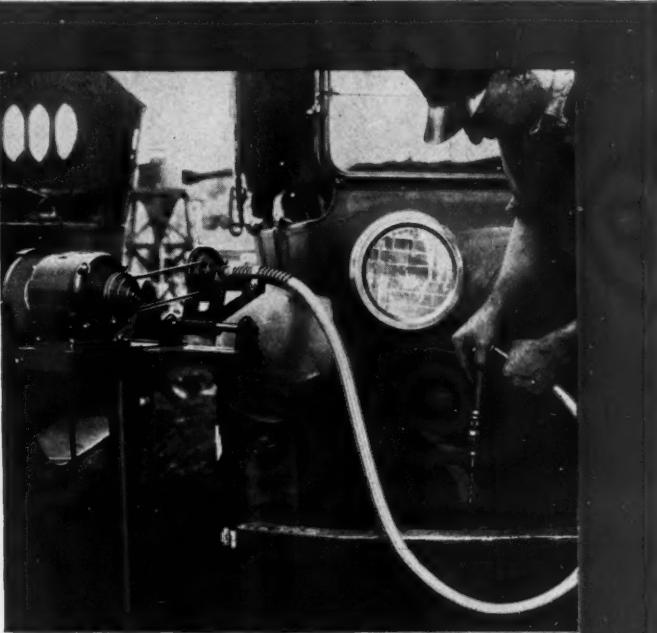
ALBERTSON & CO., Sioux City, Ia.

Sioux Flexible Shaft

Sold By All Live Jobbers



For Emery Wheel Grinding—this photo shows the Sioux in use for smoothing out welding work; also the emery wheel attached to the motor being used for grinding tools.



For Drilling—there are many jobs like this where the Sioux Flexible Shaft comes in mighty handy.



For Carbon Removing—the Sioux Flexible Shaft and Carbon Removing Brush saves lots of time and labor.



Valve Lapping is a quick job with the Sioux Flexible Shaft and Sioux Valve Grinder Attachment.

and Attachments



"The Best-Equipped Shop
in the Business."



Prest

THE LIGHT OF

Today the motor truck is indispensable in carrying on the commerce of the world.

Night and day trucks transport merchandise from city to city—their service must be unfailing and reliable.

Prest-O-Lite renders a service to the world of commerce in furnishing trucks with *the* dependable lighting system.

The Prest-O-Lite Gas Lighting System gives the clear unwavering light that is essential to night-hauling. It is simple to install, inexpensive to maintain, and outlives the truck.



Manufacturing Prest-O-Lite Gas Tanks
at the Speedway Plant



O-Lite

OF COMMERCCE

Prest-O-Lite is approved by public authorities.

Thirty-six big gas producing plants supply thousands of Prest-O-Lite Exchange Stations scattered all over the country. You can always get a full tank for your empty one by paying a very small amount for the gas only.

THE PREST-O-LITE COMPANY, INC.
INDIANAPOLIS, IND.

New York: 30 East 42nd Street Pacific Coast: 599 Eighth Street, San Francisco
In Canada: Prest-O-Lite Company of Canada, Ltd., Toronto

The Gas of a Thousand Uses



The Sign of Universal Gas Service



For full particulars of our dealer proposition write to Department Q.



UNDERBODY HOIST

The Underbody has greatly broadened the field for hoists—has made possible the real All-Purpose truck, adapted to any use.

Its location (completely below the body) allows the use of longer bodies of any style.

Its "straight-line" drive delivers the engine's power with minimum loss and minimum wear.

Its hydraulic action means maximum efficiency and complete freedom from lubrication problems.

Its "rolling wedge" action results in lower pressure and greater power.

We shall be glad to send special information on Wood Underbodies, or call at our sales and service station in any of these cities:

Baltimore
Boston
Chicago
Cincinnati
Cleveland
Columbus
Dallas
Denver
Fresno
Fort Wayne
Harrisburg
Indianapolis
Knoxville
Los Angeles
Louisville
Milwaukee
Minneapolis

New York
Philadelphia
Pittsburgh
Portland
Richmond
Sacramento
St. Louis
Salt Lake City
San Francisco
Seattle
Windsor, Ontario
Paris, France
Southport, England
Barcelona, Spain
Hamburg, Germany
Geneva, Switzerland
Sydney, Australia

Factories:

DETROIT, MICHIGAN
WINDSOR, ONTARIO
SOUTHPORT, ENGLAND
PARIS, FRANCE

FIRST!

The first wholly practicable hoist for motor trucks—the hydraulic—was conceived and developed by Gar Wood.

Wood Hydraulic Hoists were the first choice of truck manufacturers over a decade ago; and today *they are used on over 90% of all makes of motor trucks.*

They are first in numbers. There are more Wood-Detroit Hydraulic Hoists in service than any other make of power hoist.

First in organization. The Wood-Detroit plants are the largest in the world devoted to building hoists and dump bodies.

First in service. A coast-to-coast organization co-operates with manufacturers, dealers and truck users both in sales and service.

Throughout the industry Wood-Detroit stands for dependability and certainty in dump truck equipment—for exact knowledge based on experience, free from experiment and risk.

WOOD HYDRAULIC HOIST & BODY COMPANY

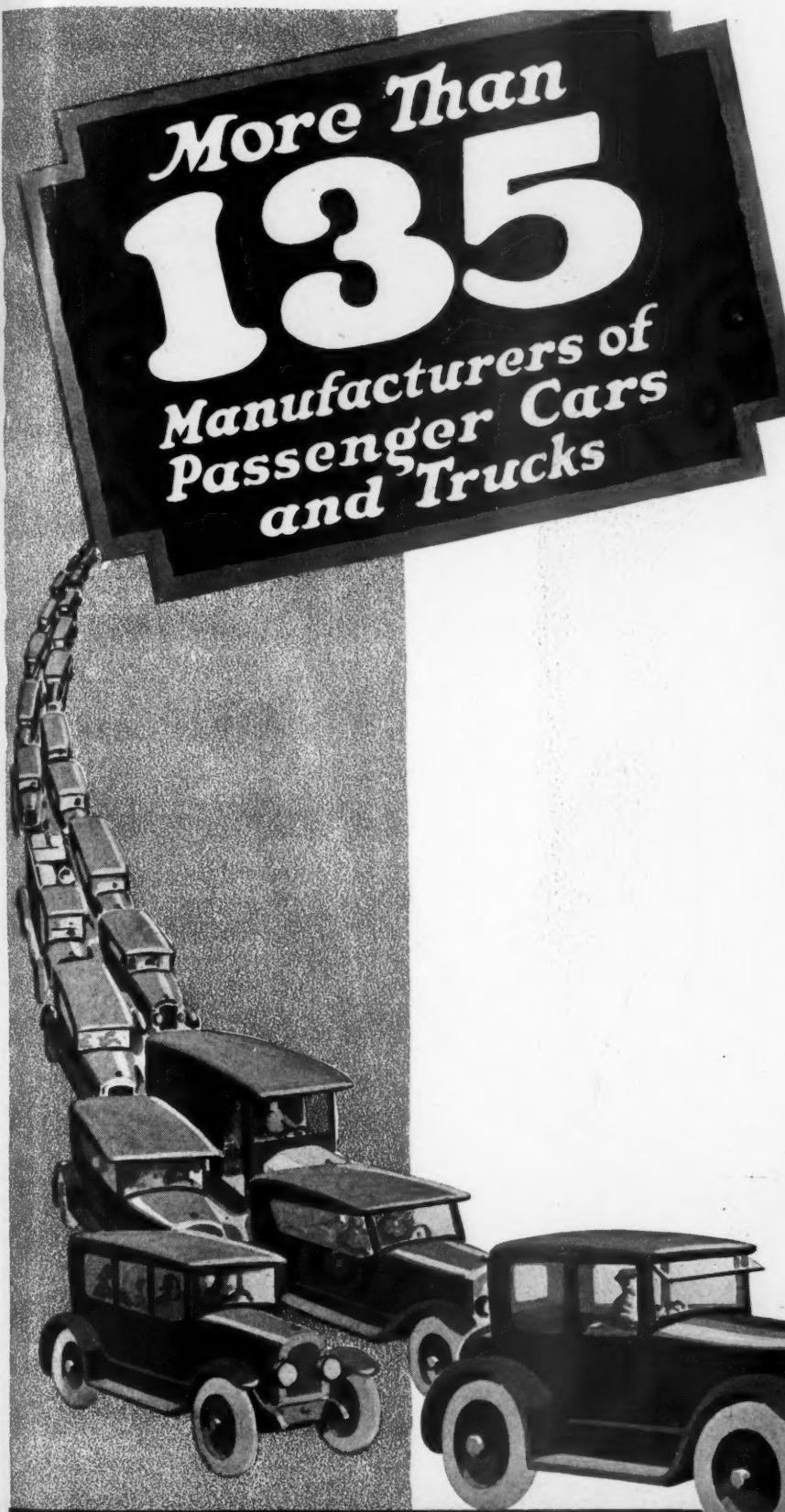
*World's Largest Builder of
Hydraulic Hoists and Steel Dump Bodies*

7944 RIOPELLE STREET

DETROIT, MICHIGAN

A Hoist on Every Truck





Use Stromberg Carburetors as Standard Equipment

When the big majority of America's manufacturers of pleasure cars and trucks specify and use Stromberg Carburetors as standard equipment—there's a reason and a mighty good one. First of all they know that the Stromberg Carburetor utilizes every drop of gas that passes through it, which means real economy.

These same wise manufacturers know by actual tests which they have made against all other makes of Carburetors, that Stromberg means flexibility, easier starting, more power and smooth operation.

When you buy a pleasure car or truck be sure Stromberg is on duty under the hood—it's your guarantee against many motor troubles. See your dealer or write direct mentioning name, year and model of your car.

A special Stromberg carburetor for every car

The Stromberg
Motor Devices Co.
Dept. 336
64 E. 25th Street
Chicago, Ill.



New **STROMBERG** Does it!
CARBURETOR



Now 50¢

UP TO 6
EXCLUDING 4 IN.
formerly 75¢



Gill Inter-Locking Joint Piston Ring

Gill Piston Pins are high-grade products manufactured in accordance with manufacturers' blueprints and steel specifications. They are quality replacement parts, the same as all other Gill products.

Gill Manufacturing Company
8300 South Chicago Avenue Chicago, Illinois

The Special Oil Wiper Piston Ring perfectly controls the lubrication of the cylinder wall.

The Servus Piston Ring is a popular step-cut ring made in accordance with Gill standards of quality and accuracy.

Maximum Power With Minimum Investment

This statement is even more striking now than ever before.

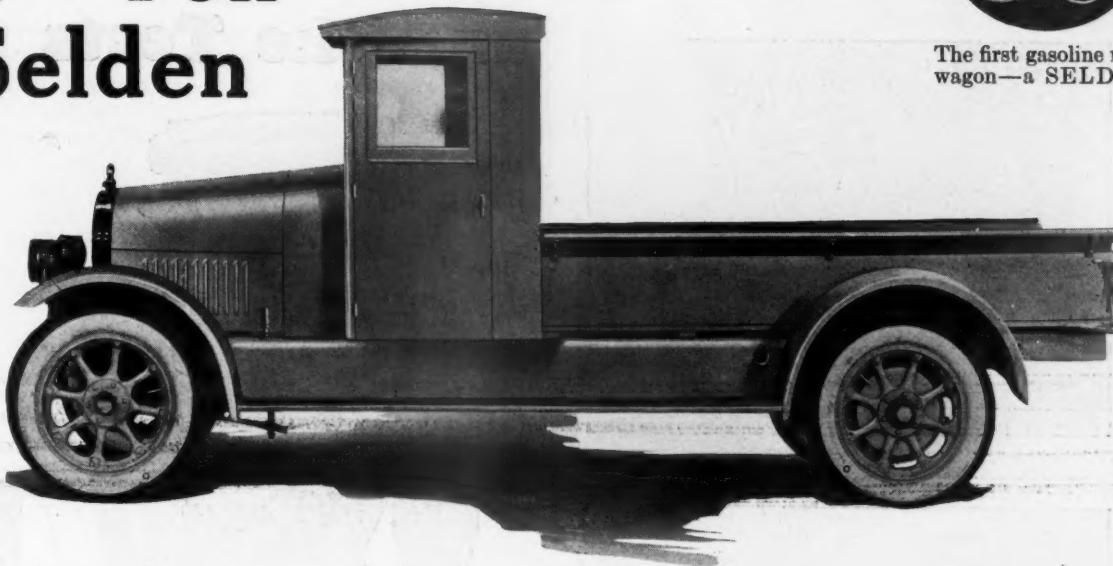
The name GILL has always stood for *Products of Quality* throughout the automotive trade.

The reduction to 50¢ for the GILL Inter-Locking Joint Piston Ring enables the mechanic to install the most efficient high-grade compression ring and give the car owner maximum power at a small investment.

The GILL Inter-Locking Joint Piston Ring is the leader in the patented ring field. It positively prevents the leakage of gas, oil or loss of compression by the joint. The Inter-Locking Joint feature of this ring makes it particularly adaptable to cylinders that are slightly worn. It permits an expansion of 1/8 to 3/16 of an inch, depending upon the diameter of the ring, before any loss of compression occurs; which means more power and better mileage. GILL Piston Rings withstand the test of service.



THE NEW
1½ Ton
Selden



The first gasoline road wagon—a SELDEN

Chassis price f. o. b. factory

\$1575

with 4 cylinder motor 4" bore x 5" stroke, 46 H. P. at 2000 R. P. M. 6 cylinder motor 3 3/8" bore x 4 1/2" stroke, 55.5 H. P. at 2300 R. P. M. optional at \$150 extra. Excise tax additional.

Chassis price includes standard painting, 34"x5" pneumatic tires front and rear, electric starting and lighting, speedometer, momometer, tire pump, jack, tools. Body and cab extra.

PACEMAKER

Just as predicted—heavy sales prove IT'S A WINNER. Its snappy appearance, and satisfying performance WIN for it instant approval; the big truck-value at the price is quickly appreciated—altogether it's a most attractive selling proposition.

Fourteen heavy-duty SELDEN models; 1½, 2½, 3½ and 5 tons capacity; also a Special Motorbus.

A SELDEN for Every Transportation Need

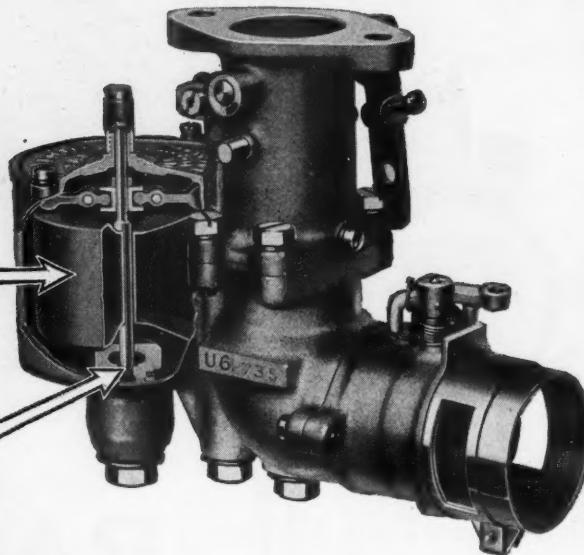
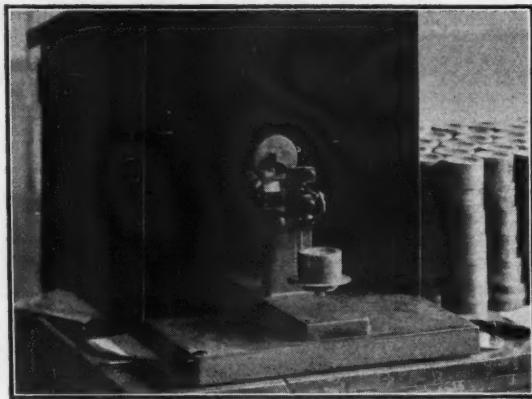
SELDEN TRUCK CORPORATION

Rochester, New York

Selden Motor Trucks

ZENITH

The Zenith Float Mechanism and the Tests



(Upper) Zenith floats being weighed. A variance of one gram—1-28 of an ounce—from the specified weight causes them to be scrapped.

(Lower) Zenith needle points being inspected under a microscope which magnifies 144 diameters. This inspection discloses any imperfections however minute, which may remain after grinding.

ZENITH
CARBURETOR

*There is a Zenith, tested
and proven, for every motor.*

With such modern instruments and such rigid inspection to guard the gas flow, a Zenith must be frugal—it is no wonder it is known as the economy carburetor.

And yet the speediest and most powerful engines are Zenith-equipped.

ZENITH-DETROIT CORPORATION

Manufacturer of

ZENITH CARBUREATORS
DETROIT MICHIGAN

NEW YORK . CLEVELAND . CHICAGO

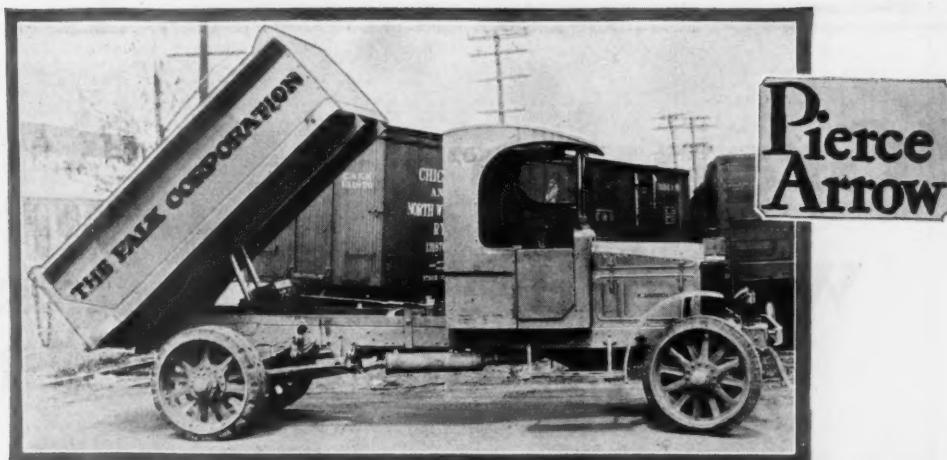
Service Stations in over 800 cities

Branches:

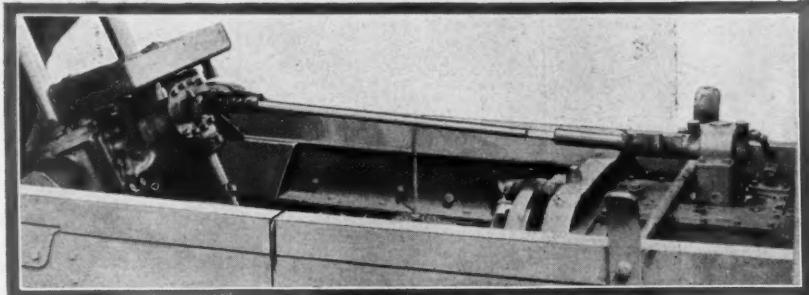


HEIL

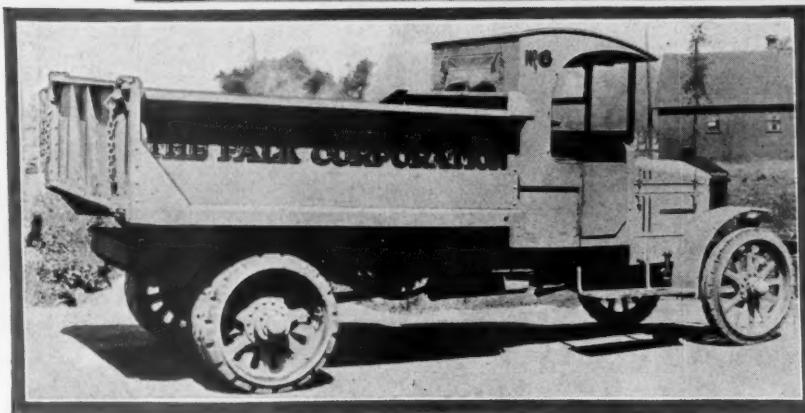
The panel of photographs shows a Heil Steel Dump Body, Model SFC, mounted with No. 5 Hydro Hoist on a 4-5 Ton Pierce Arrow. This body is 9'6" in length; width 5'10½" at front and 6'1½" at rear; 20° sides; capacity 135 cu. ft.



The Heil Company is the largest manufacturer of Steel Dump Bodies, Hydro Hoists and Compartment Truck Tanks for motor trucks, in the United States.



Heil Hydro Hoists make possible exceptionally high dumping angles, from 45° to 60°.



The Falk Corporation truck, one of several dump jobs operated by this great company, is used for transporting foundry clay and slag. It dumps under very difficult conditions.

LIGHT WEIGHT—LOAD DISTRIBUTION

¶ Weight and Load Distribution are two mighty important factors to consider when furnishing Dumping Equipment.

¶ The Hydro Hoist is considerably lighter in weight than other hydraulic hoist equipment. It is simple and compact, and lifts the load direct, so that all rollers, cables, pressure piping, arms, and cams are eliminated.

¶ The Hydro Hoist requires no structural steel frame to carry the hoist.

¶ The Hydro Hoist is mounted on the strongest part of the chassis frame—interferes in no way with the ready accessibility of chassis parts.

¶ The Hydro Hoist permits use of short bodies to keep center of load forward and keep within City and State Tire Load Laws.

Write Today for Latest Information and Prices

THE HEIL CO.

1143 MONTANA AVE.

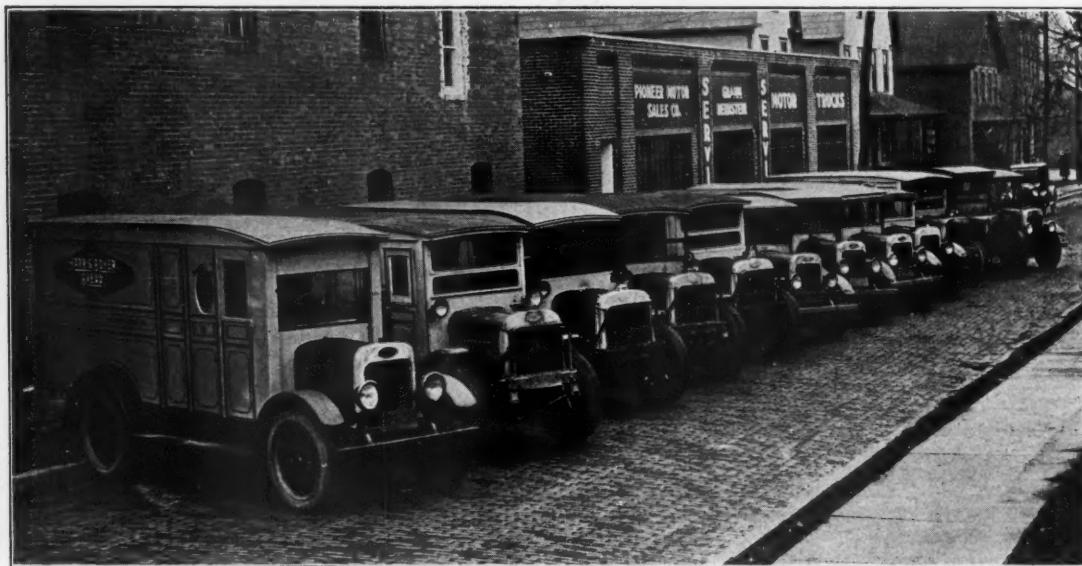
MILWAUKEE, WIS.

Distributors in All Important Cities Factory Branches in Chicago and Philadelphia



“Gramm” says:

**We build Trucks to take the Load
off the Owner's Mind**



This fleet operated in Johnstown, Pa., has made a wonderful record over the hills. In 10 years of service no Gramm-Bernstein has been replaced.

Beware of buying or selling Price Only. It is length of Life and Constant Service that Count.

ASK OUR OWNERS

**Look up our 1924 Specials—Eye Openers—
and catch the purchaser's Enthusiasm**

Gramm-Bernstein Truck Corp.

P. O. Box 599

Lima, Ohio, U. S. A.

We furnish service parts back to the original 23 years ago



Traction— the giant that keeps your trucks moving efficiently.

It is a definitely established fact that the Non-Skid Stag-gard Stud Tread of Republic Stag Truck Tires gives the greatest traction and affords the most complete protection against skidding, side-slipping or spinning wheels, offered by any tire on the market today. The actual experiences of hundreds of our customers enables us to make this frank statement with absolute confidence.

Republic Stag Truck Tires are made in solid or cavity center types to fit any wheel, to meet any requirement. Get in touch with the nearest Certified Distributor, at the "Sign of the Eagle" where capable service is united with the highest standards.

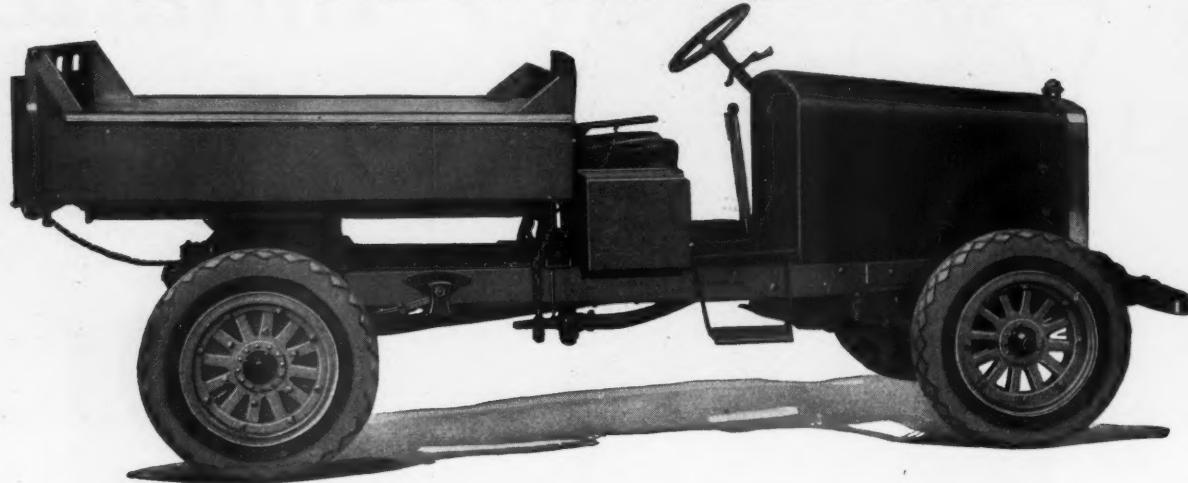


This sign is displayed by
Republic Certified Distributors

REPUBLIC STAG TRUCK TIRES



A complete line 1½, 1½, 2, 3, 4 and 6 ton capacities and a special Bus Chassis



The SERVICE CONTRACTRUC *Popular With Road Builders*

DURING the past few years road builders have used thousands of cheaply constructed trucks of one to one-and-a-half yard capacity. Experience has taught them that while the initial investment was small, this equipment would not stand up under the punishment of their work. Prohibitive maintenance costs and the necessity of frequent replacement made their operation extremely unprofitable.

The SERVICE CONTRACTRUC was developed, incorporating the ideas of leading road builders, to meet their requirements for a truck that could be depended upon to deliver efficient and economical transportation under all conditions. Further, its ability to stay continually on the job relieves the superintendent of a great mental hazard.

Contractors are purchasing trucks in fleets of five or more. The SERVICE CONTRACTRUC fills the pressing need of the road builder. The CONTRACTRUC is the equipment for the companies who demand the best.

Distributors and Dealers: At the present time we are putting on an intensive direct-by-mail campaign to road builders. Here is an opportunity to assure your profits for 1924. Road contractors buy the major portion of their equipment during the first six months of the year.

Write now for details.

SERVICE MOTORS, INC., WABASH, INDIANA

Service
MOTOR TRUCKS
Scientifically Cushioned

WITH THE RED PYRAMID



ON THE RADIATOR



Six out of ten manufacturers prefer Spicer

TWENTY years ago the first Spicer universal joint was made at Plainfield, N. J. Today, in the most exacting engineering market in America, the Spicer Propeller Shaft is the choice of 60 per cent of automobile manufacturers, who find the Spicer is a strong supporter of the reputations of their cars.

There is history back of this simple statement of today's position. A history of skillful design and sound engineering along progressive lines. A history of more than a few who have tried and failed to build as good a shaft, finding it a highly specialized industry requiring the combined ability of many experienced workers.

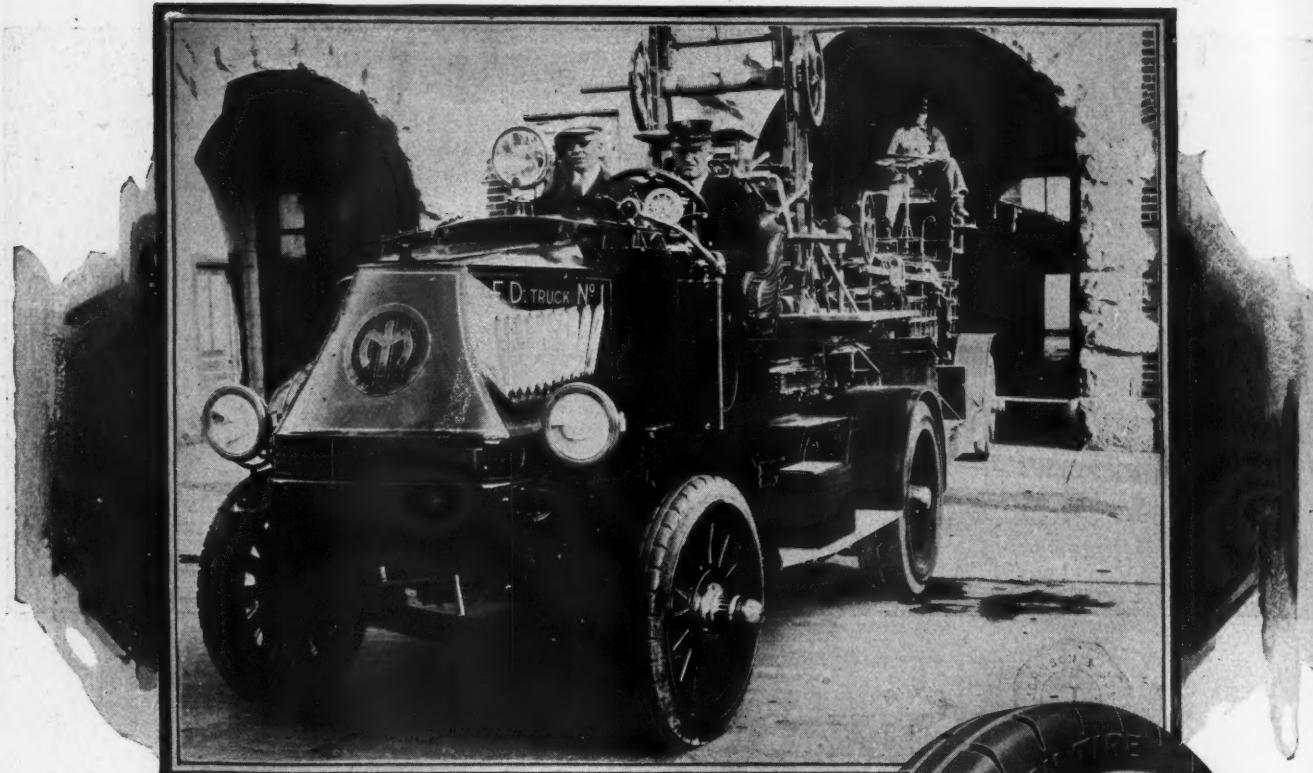
Above all, a history of a solidly-established firm whose policies are broad and fair—who work in the closest cooperation with customers—whose product and promises can be judged by twenty years of reliable performance.

Associated *Spicer* Companies



Spicer Manufacturing Corporation, South Plainfield, N. J.
Parish Manufacturing Corporation, Reading, Pa.

Sheldon Axle & Spring Company, Wilkes-Barre, Pa.
Salisbury Axle Company, Jamestown, N. Y.



The new fire truck of the Boise, Idaho, Fire Department equipped with U. S. Cushion Tires on the front wheels and U. S. Mono-Twins on the powerful drivers. This is a combination that answers the exceptional requirements of this type of heavy, speedy vehicle.

What Winter Hauling Proved for the New U. S. Cushion Tire

A NEW economy has been entered on the records of hundreds of truck operators throughout the country in the last few months.

The most exacting check on how the new U. S. Cushion Tire stood up under the strain of winter hauling has established a new standard in tires for front wheels of heavy trucks.

A repetition of what U. S. Mono-Twins on the rear wheels have been doing for years.

The combination has made a big saving in motor repair costs, assured easier riding and given a greater protection to the load.

The new U. S. Sprayed Rubber and a new scientific design in cushioning makes the U. S. Cushion closely approximate the features of the pneumatic, yet has the advantage of greater strength and longer mileage.

Ask the nearest U. S. Truck Tire Service Dealer.

United States Rubber Company

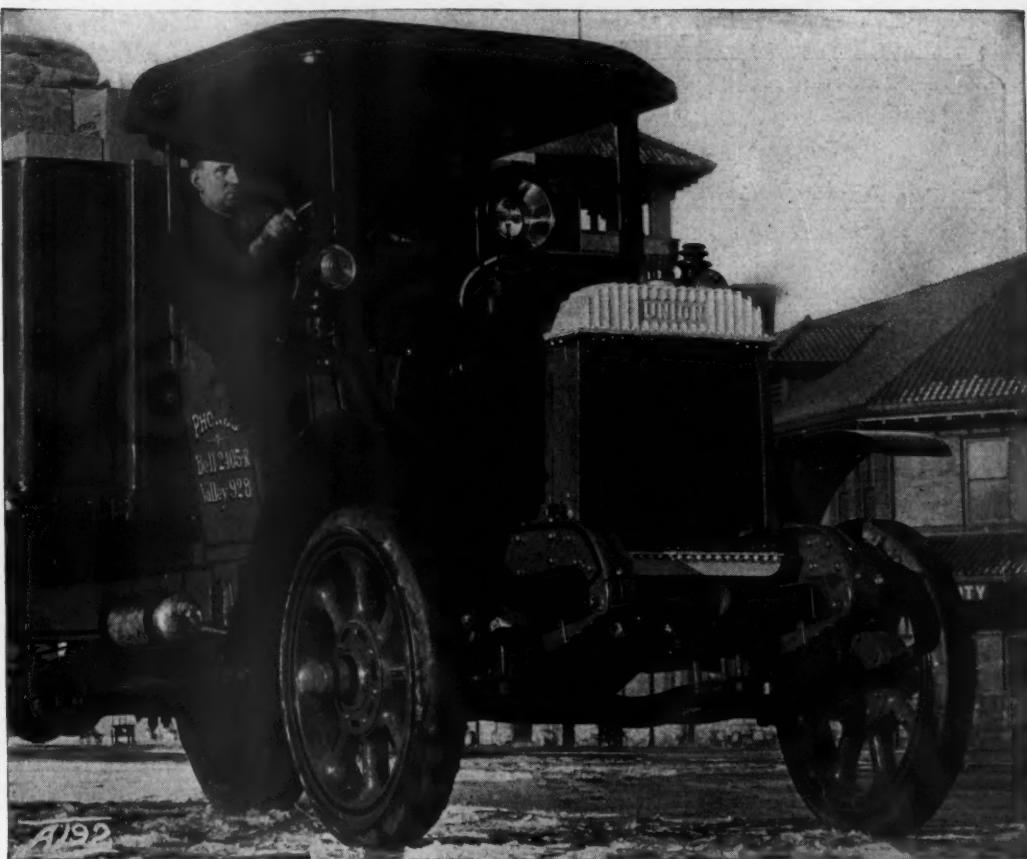


United States Truck Tires are Good Tires



UNION 4 TON TRUCK

Showing Standard Installation of Shuler Front Axle, Model 650



Because “IT'S A BETTER FRONT AXLE”

The Union Motor Truck Company, Bay City, Michigan, is using Shuler Front Axles on one motor bus and two motor truck models. They have found, as have many other manufacturers of motor trucks and motor busses (among them some of the leaders in the industry) that Shuler concentration on this one major unit and Shuler specialization of design for particular fields of service, has produced just what it logically should—

A Front Axle that will stand up under any emergency
That will give the highest degree of efficiency in operation
That will not fail either in safety or in service

Special information to manufacturers on request, together with the fullest co-operation from the Shuler engineering staff

SHULER AXLE COMPANY, Incorporated

3003 Jones Street

LOUISVILLE, KENTUCKY, U. S. A.

SHULER FRONT AXLES

for MOTOR BUSES, TRUCKS
TAXICABS, TRACTORS,
AND TRAILERS

© 1924
Shuler Axle Company



Consider the Electric Truck as a means of cutting delivery costs

A great deal of attention is being paid to transportation problems by manufacturers and merchants at the present time. This is especially true of those who have a large local delivery. To them the question of economical delivery is of the utmost importance.

The increasing popularity of the electric truck and the ever-increasing number of firms that use it indicate that the electric truck has been the solution of this problem. A very conservative estimate shows that about 80% of the city traffic could be economically handled by electric trucks. And, further—it has been demonstrated that the same work can be done much cheaper.

The electric truck has a varied, yet almost universal field of performance. A few of the applications on which it is being used extensively today are: Department stores, laundries, bakeries, dairies, ice cream and beverage manufacturers.

You should investigate the electric truck as a means of saving money and rendering better service.

You will use electric trucks because of their year-round reliability, economy, ease of operation, simplicity of construction and long life.

Use electric trucks equipped with Westinghouse motors and controllers. They have demonstrated their reliability in actual operation.

Westinghouse Electric & Manufacturing Company
East Pittsburgh

Pennsylvania

Westinghouse



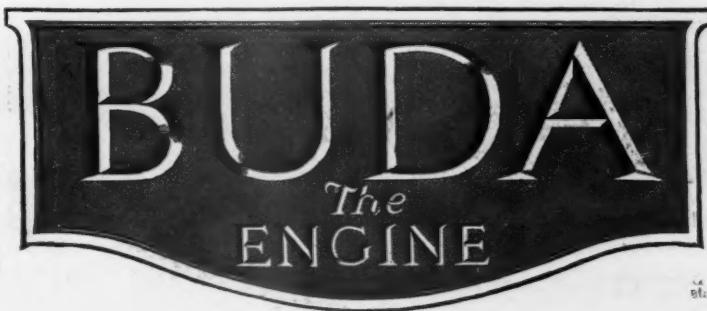
Buda-powered Parker Truck built by the Parker Motor Truck Company, Milwaukee, Wis.

BACK of the Buda reputation for durability, power, dependability and economy are the years of Buda performance which have made that reputation possible. In the face of such records, mere words seem im-

potent. But it is remarkable the number of dealers who have commented on the selling-power of that reputation. Many a sale, they say, has been clinched with those five magic words —“*it has the Buda engine.*”

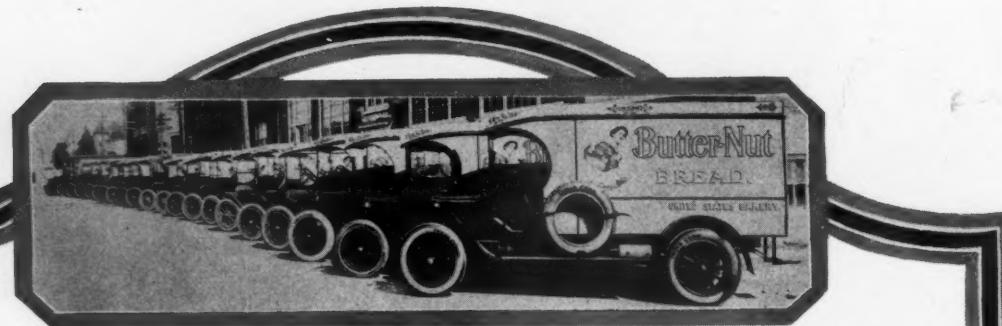
THE BUDA COMPANY, HARVEY CHICAGO SUBURB ILL.
ESTABLISHED 1881

Buy only genuine Buda Parts for your Buda engine. New Parts Catalog No. 432 is now ready



INDIA TIRES

EVERY MONTH MORE AND MORE COMMERCIAL ESTABLISHMENTS ARE BECOMING PARTIAL TO INDIAS



Butternut Bread, U. S. Bakery, Portland, Oregon.
Scores of nationally known Baking Companies use India Tires. High-class commercial establishments NEED "America's Best" Tires.



City Transportation Co., Tacoma, Wash.

On hundreds of "city operated" busses like this, India Tires are consistently giving dependable service at lowest cost per mile.



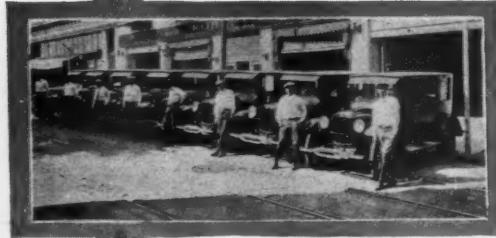
**FOR THOSE
WHO NEED
THE BEST**

**ECONOMY
SAFETY
RELIABILITY**



The Shear Co., Waco, Texas.

On heavy duty trucks, as well as on buses and delivery cars, India Tires are consistently piling up big mileage records.

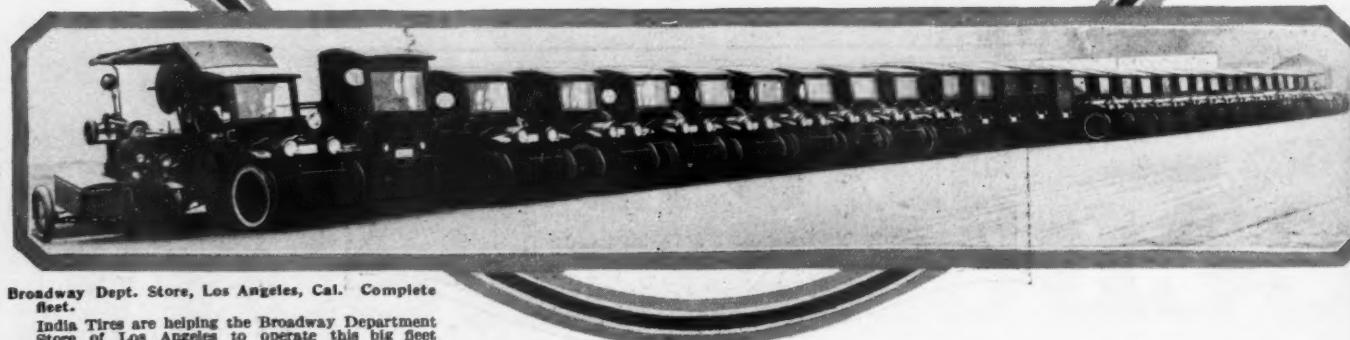


Roberts Company, 8 Hupps with chauffeurs. Here's another fleet in the Southwest equipped with India's all around.

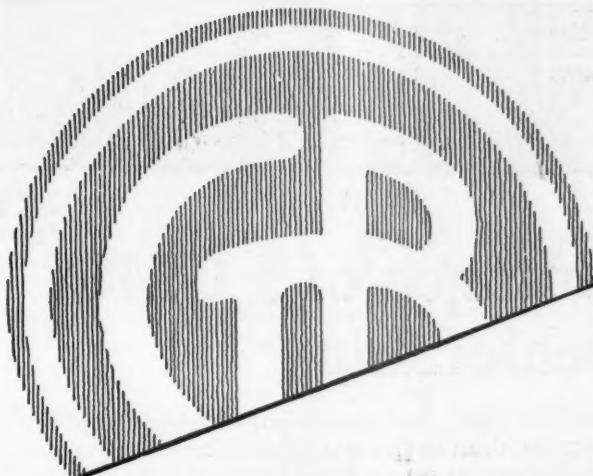
**The INDIA TIRE & RUBBER CO.
AKRON, OHIO**



Dashpoint Transportation Co., Tacoma, Wash. This big bus is one of several of the "long distance" type operating on the Pacific Coast on India Tires because THEY DO NOT SKID.



Broadway Dept. Store, Los Angeles, Cal. Complete fleet.
India Tires are helping the Broadway Department Store of Los Angeles to operate this big fleet economically.

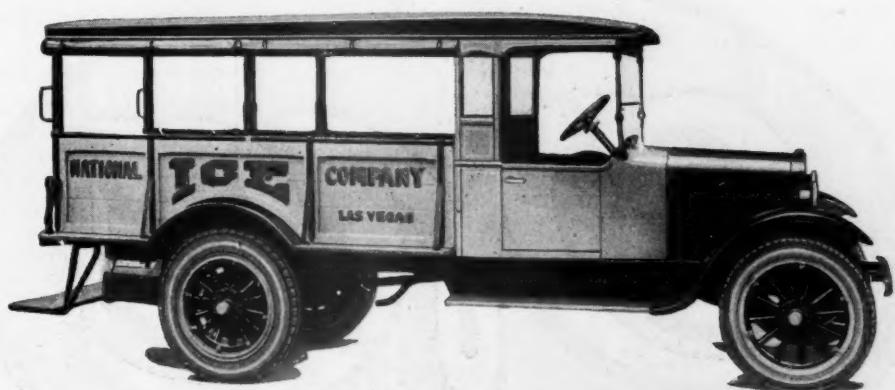


Reliable Power

One of the most conspicuous reasons for the success of Graham Brothers Trucks is the fact that they are powered by Dodge Brothers engines.

1 Ton Chassis, \$1265; 1½ Ton, \$1325; f. o. b. Detroit

GRAHAM BROTHERS
Detroit



Standard 1½ ton Truck for Ice Dealers. The body is one of 30 standard types manufactured by Graham Brothers

GRAHAM BROTHERS TRUCKS
SOLD BY DODGE BROTHERS DEALERS EVERYWHERE

The Advantages of a GMC Dealership

The special advantages enjoyed by GMC dealers are both unusual and highly profitable. Exclusive features embodied in the truck itself assure larger sales volume and complete owner satisfaction while the co-operation provided by the General Motors Truck Company goes beyond that offered by any other truck manufactured.

The Truck Itself:

1. The GMC line is complete with models ranging from one to fifteen tons capacity. There is a GMC for every purpose.
2. The famous GMC two-range transmission—surplus power and high speed in the same truck without increased expense of operation.
3. Every wearing part is quickly and easily replaceable without renewing engine or chassis.
4. Unequalled low cost of maintenance. Unusually low operating cost.
5. Price lower than any other truck of the same capacity and quality.

Dealer Co-operation:

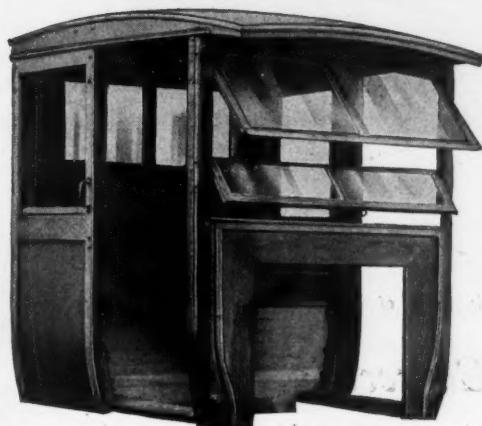
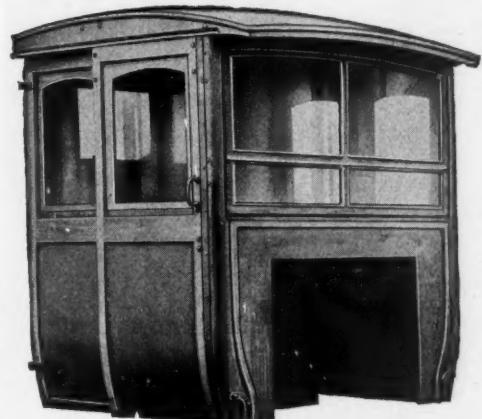
1. Factory branches in every part of the country.
2. A special corps of factory-trained service men make regular visits to every GMC dealer.
3. GMC advertising appropriation is the largest of any truck company in the world.
4. Dealers are invited to a "service clinic" held at the factory twice each year.
5. Wholesale and retail financial help is supplied by G. M. A. C.

GENERAL MOTORS TRUCK COMPANY — Pontiac, Michigan
Division of General Motors Corporation



GMC

Protection that Pays Everybody!



BEWARE OF IMITATORS!

The skill and experience built into the original "Rain or Shine" Truck Cab cannot be duplicated.

Protection and Comfort provided in a truck cab shows more than mere consideration for the driver. It shows good business principles.

Protection against blowing snow, driving rain, and freedom from bunglesome clothing, robes and benumbed faculties mean SAFETY for driver and for truck. Proper cab protection is an urgent safety measure, and all owners are for it when they realize what it means. Comfort means added efficiency, more contented employees—advantages which make the cost of a good cab insignificant.

RAIN OR SHINE TRUCK CABS

take advantage of every mechanical principle for strength and durability. In their construction, Flexibility and Strength have been combined to a remarkable degree. Flexibility that absorbs straining and destructive vibration—Strength that holds every joint within the bounds of its proper flexibility and gives the cab endurance that enables it to stay with any truck to the very last. Non-conductive to heat and cold, tight as a drum when closed, they nevertheless can be instantly thrown open on all sides for quick entrance or exit and for summer comfort.

Truck manufacturers who specify RAIN OR SHINE CABS for their trucks, enlist the good will of all truck drivers and add a sales feature of special prominence.

Distributors will find exceptional profits in handling the only cab that is guaranteed unconditionally by its maker. Write for details.

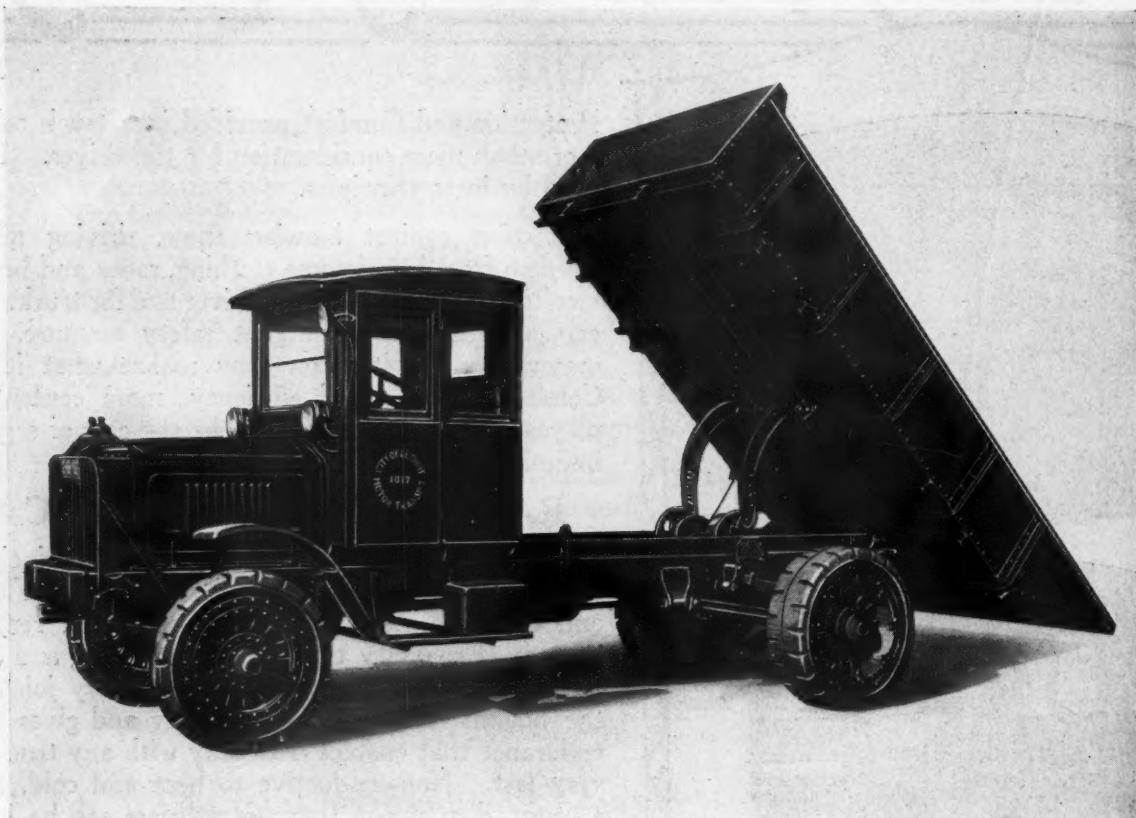
General Woodwork Corp.
Cincinnati Ohio

RAIN OR SHINE TRUCK CABS

Guaranteed To Be Replaced If They Do Not Hold Up In Service

BORG & BECK MECHANICAL HOISTS

A Rugged, Economical and Dependable Unit for
Elevating Dump Bodies



One of the Five-Ton Standard Trucks equipped with Heavy Duty Borg & Beck Hoists, in service of Street Department, City of Detroit, Mich.

A Mechanical Hoist is Basically Correct in Principle

The method used in the operation of the dumping mechanism is the same proven and accepted method of power transmission used to drive the truck. This mechanical hoist is positive and dependable. Climatic changes, dirt or vibration do not impair its efficiency.

The Borg & Beck Mechanical Hoist is universally

adaptable to every line of industry wherein a motor dump truck is used. It is designed, built and guaranteed to give the greatest service.

Our Engineering Department will gladly give any desired information concerning the hoist itself or suggestions as to the most efficient dump truck equipment for your particular needs.

Built in medium and heavy-duty sizes.

The Borg & Beck Co.

Sales and Engineering Offices
920 South Michigan Avenue, Chicago

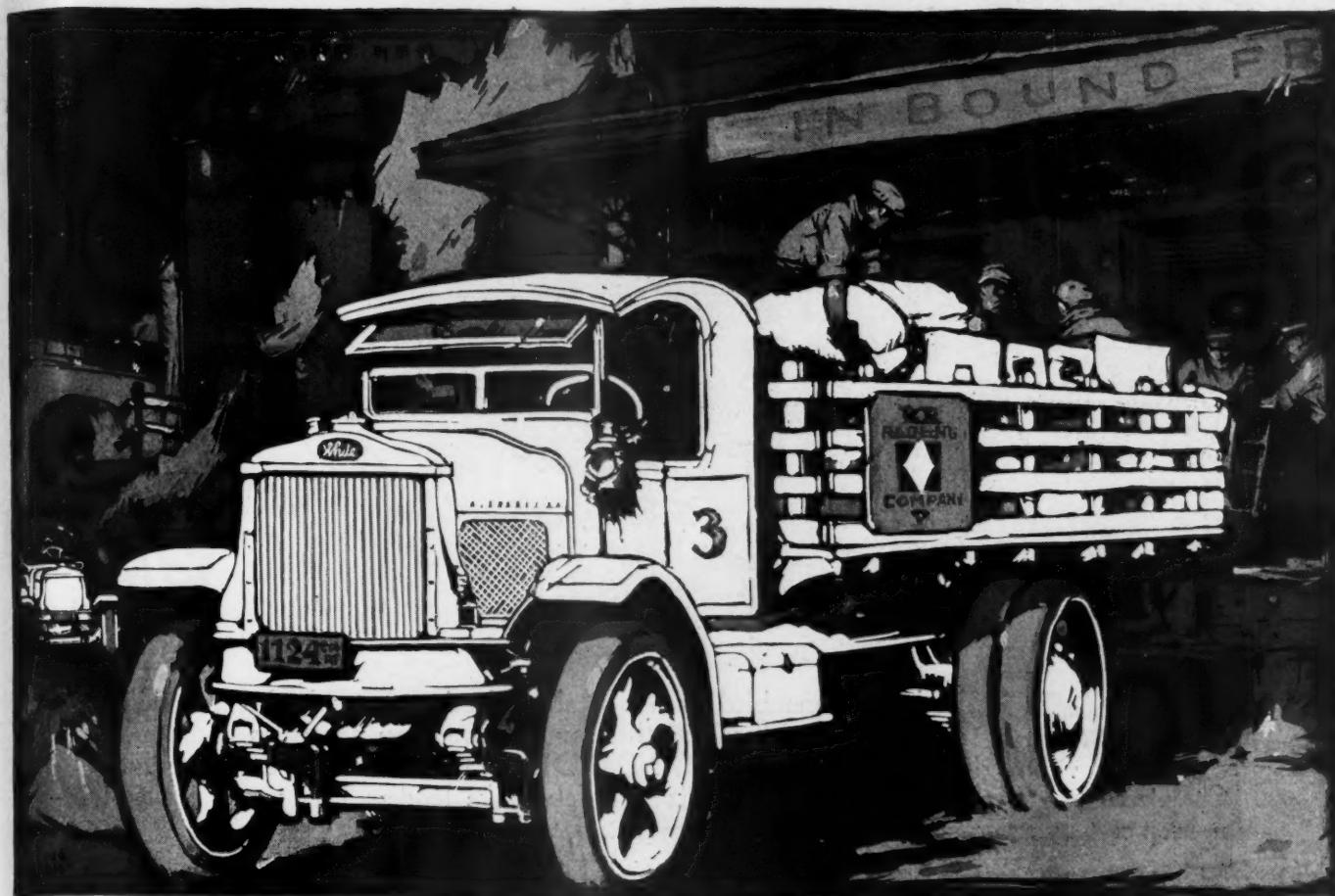
Factories: Moline and Chicago

Write us for
new descrip-
tive literature
and distribu-
tors' franchise
proposition.

Distributors and Installation Stations

Shadbolt Mfg. Co.....	Brooklyn	Quaker City Iron Works.....	Philadelphia
The Schnable Co.....	Pittsburgh	Quaker City Iron Works.....	Washington
W. B. Boom Supply Co.....	Cleveland	Quaker City Iron Works.....	Baltimore
Rogers-Woodward Co.....	Detroit	Quaker City Iron Works.....	Scranton
Crown Motor Carriage Co.....	Los Angeles	Quaker City Iron Works.....	Harrisburg
Gorey Automotive Parts Company.....	Albany	Quaker City Iron Works.....	Wilkes-Barre
W. W. MacDonald Co.....	San Francisco	Quaker City Iron Works.....	Allentown
Borg & Beck Co.....	Moline	Quaker City Iron Works.....	Reading

Chicago Sales and Service, 2807 Michigan Ave., Chicago



Wherever truck wheels turn

TONGUE or pen has never uttered a truck advertisement more clear and convincing than the one being written every hour of every day on the face of earth by the tens of thousands of White Trucks in service.

These White Trucks write in work, not words; in performance, not promise. They write in money-earning miles.

And men read what they write. It is read on the neat mahogany desk top of the fleet owner. It is written there on cost records. It is read in the sweaty clatter and turmoil of the teeming freight depot; amid screeching of hoists and clanging of buckets where great buildings are struggling towards the sky line; on the long, silent, all-night drive over a trackless plateau to a lone, gaunt oil

derrick or a mine shaft. It is written there in unfailing dependability. It is read by the hard-headed, tight-fisted captain of industry and by the weather-beaten, hard-handed captain of a single truck—the driver. And each reader understands it, for it is written in the universal language of work well done. The vast fleets on the White Roll Call; the unmatched volume of mileage records in multiples of 100,000 miles; the 23 years through which The White Company has risen to the leadership of the truck industry—these are chapters in this story.

Before you buy a truck, read this advertisement which is being written daily by White Trucks in service. It is being written wherever truck wheels turn—in your city, right there in the street outside your window.



Assuring continuous, sustained transportation everywhere

THE WHITE COMPANY
CLEVELAND

WHITE TRUCKS

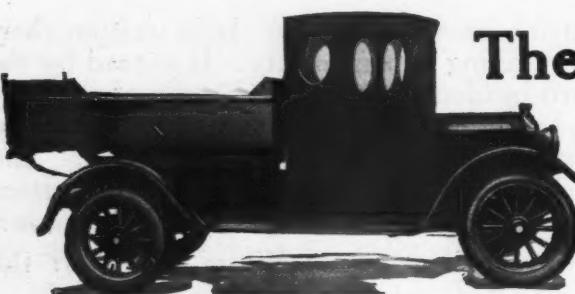


Commerce

Trucks are assembled from a notable selection of standard units. The thoroughness with which these units have been chosen is indicated by the fact that 3-M STANDARDIZED FENDERS are among them.

Commerce engineers knew that by standardizing a detail like fenders, they would reduce upkeep cost by securing better quality and complete interchangeability.

Motors Metal Mfg. Co., Detroit, Michigan



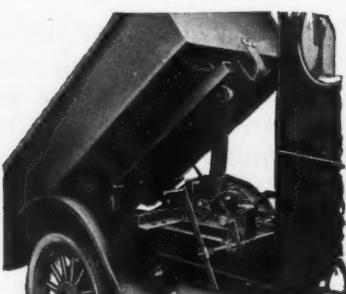
The New Model—Galion 395

*Specially Designed for
1 and 2 Ton Trucks*

Equipped with the new powerful Galion underneath hoist, and the newly designed rocker-arm bearings the load can be raised to an elevation of 50 degrees in less than 20 seconds.

The new hoist mechanism permits the body to be placed close to the cab. This gives greater dumping clearance, and distributes the weight of the load more evenly over the entire chassis. The sub-frame sills are adjustable and can be fitted to any make of truck chassis.

BULLETIN 395 WILL GIVE YOU
COMPLETE DESCRIPTION
We Will be Glad to Send It to You



Width 45"
Length 90"
Height 18"
Capacity 44 Cu. Ft.

The Galion All Steel Body Co., Galion, O.

TEAGLE

*Put on the Truck
to Stay!*

The ability to stay put in the field and give satisfactory results is characteristic of Teagle Magneto.

Teagle Magneto can be furnished either with or without Impulse Starters.

Write for Catalogs

The Teagle Co. Cleveland, Ohio



"The Simplest Magneto of Them All"

The Business With a Backbone

1½, 2½, 3½ and 5 Ton Capacities



The Truck Complete

ESTABLISHED 1903

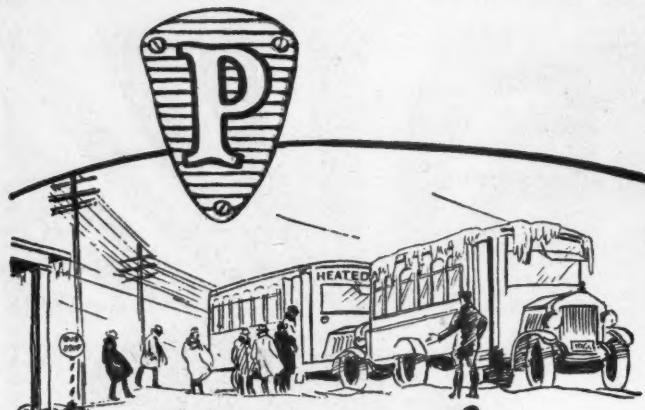
—straightforward, upright, honest, permanent—draws its support from those who look deeper than the mere trickery of the trade-in. The big truck-buyer is no less anxious than the truck-dealer to avoid acquiring "orphan" trucks. He, like the alert dealer, closely watches for those signs of a manufacturer's instability—ruinous price-cutting, quality-skimping, the forced marketing of "quantity output" regardless of actual needs.

The Atterbury dealer sells a truck on the basis of the service that he knows the Atterbury will render. He sells a truck that has maintained its sterling reputation for twenty-one years.

Atterbury Sales Policies are unique but not experimental. They were formulated in the field—not at an office desk. The dealer who wants to establish *permanently* will find the Atterbury proposition interesting.

Write Today

Atterbury Motor Car Company, Buffalo, N. Y.



Cold!

Smith's bus business was fine. Then winter came. And a competing line with heated busses! The snow and Smith's once prosperous bus line disappeared together!

HUNDREDS of bus owners have bowed to heat competition this winter. Hundreds more, yet unprepared, will lose out next winter. People simply will not shiver in dank, smelly busses, when they can relax in cozy clean-air busses.

This truth has already been realized by such representative organizations as the Camden County, N. J., Bus Association, General Motor Truck Co., and International Harvester Co., who have installed modern PETRY BUS HEATING SYSTEMS in their vehicles.

Simple design, large pipes, well-planned construction in the Petry, they have found, insure radiation of full heating power from the exhaust.

Seamless steel tubing, smooth joints, absence of angles in the Petry insure a heat that is untainted by gas or odor. Clothing guards, high-grade insulation, easy regulation of the Petry insure the passengers enjoying the heat without being made uncomfortably aware of its presence.

And, in spite of these profitable refinements, the weight of the Petry Bus Heating System is so unusually small that an extra fare may be carried with the same operating expense! You will realize a proportionate economy, too, in the original cost of installation.

Get the details now. Winter is still here. And you can make your preparations for next winter in ample time. Write for our illustrated folder today.

N. A. Petry Co., Inc.

324 North Randolph St.
Philadelphia
Pa.

THE PETRY UNIVERSAL DASH CONTROL
The only dash control with means for fastening tubing at valve. \$2.00.

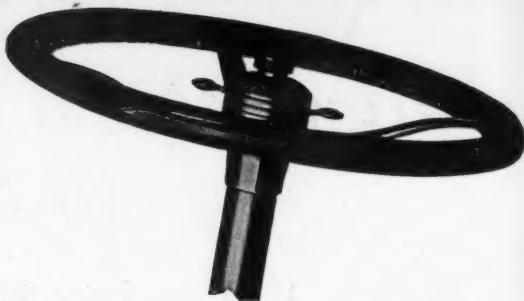
THE PETRY PUMP
The only pump with spread base, allowing full room for operation. \$4.00.
West of Denver \$4.50

THE PETRY TUNING-UP VALVE
usually demanded in combination with Bus Heating System. Cutting out muffler, it permits detection of clogged motor, adjustment of carburetor, and easy removal of carbon.

THE PETRY PEDAL
Adjustability of operating lever permits easy operation.

Petry Products

**Easy Steering
Long Wearing
Absolutely Safe**

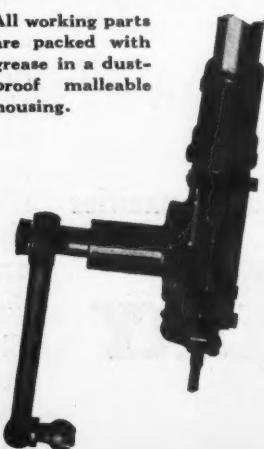


A TRUCK driver has more important work to do than holding on to a steering wheel. His employer's interest lies in having his attention free to watch the road. For this reason many fleet owners, who know how easy it is to steer with Lavines, replace the steering gears of all their trucks with them. They know that it pays to make steering easy, and also to protect their drivers from fatigue by eliminating the feel of road shocks.

Besides this efficiency and shock-deadening irreversibility, Lavine Gears have a safety in strength, and wear-resisting steel construction of hardened parts that gives economical maintenance and absolute safety. A Lavine will be the last working part of a truck to wear out.

**There is a LAVINE
Steering Gear for every
Car, Truck,
Motor Bus and Tractor**

All working parts are packed with grease in a dust-proof malleable housing.



Manufacturers, fleet-owners and truck dealers should write us and get full information as to how Lavine efficiency and quality can be used to earn them profits. Write today.

**LAVINE GEAR
COMPANY**
60-80 Keefe Avenue
Milwaukee, Wis.

Lavine
Steering Gear

A New Automatic Dump!

Does Not Rack the Chassis

A quick dump and a quick get-away, the demand of today in highway and other construction work is now a FACT. Concrete mixers that require a load every minute and a half, filling and excavating operations, the hauling of crushed stone, gravel and building materials of all kinds provide a limitless market for this

New SAFTEE Automatic Dump Body



By an entirely new principle the one drawback of the automatic or gravity type dump body—severe racking of the chassis—is now eliminated. This new SAFTEE does not rock on sub-frame with the type of rockers usually found on automatic bodies, but is securely locked to chassis in both normal and tipped positions. Cannot become loose or slip. Dumps in 3 seconds without racking. Returned to normal position by operator in 2 seconds. The new principle makes no use of chains or springs.

Built close to ground but gives 18 inches of clearance when dumping. Mounted close to cab, properly distributing weight. Capacity, 27 cubic feet—with sideboards, 1½ cubic yards. Tail-gate double acting, opening either top or bottom and automatically when dumping. Easily installed; no drilling.

Immense sales opportunities are opened up for you NOW. Write today for full details.

Ditwiler Mfg. Co.⁵⁵
GALION OHIO



Single unit 4 cylinder FWD motor car, Eisemann equipped, owned by San Antonio & Aransas Pass Railway.



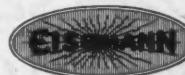
The need for absolute dependability in gasoline propelled railway coaches is no less important than in motor trucks or buses.

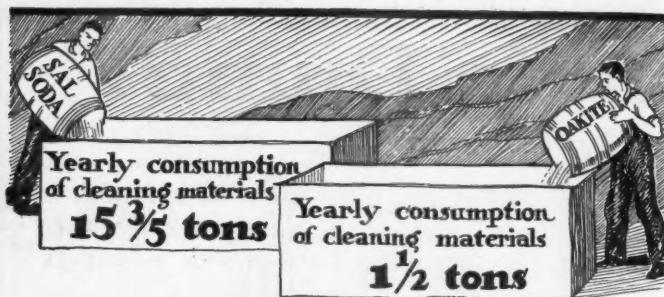
Builders of railway coaches have readily grasped the fact that weakness, at any point, will naturally result in unfavorable

reaction against their product—if not general condemnation of the use of gasoline motive power in railway locomotion.

The Four Wheel Drive Auto Company and other leaders in this newest industry have adopted Eisemann ignition in recognition of its unsurpassed reliability.

EISEMANN MAGNETO CORPORATION
BROOKLYN, N. Y.
DETROIT CHICAGO SAN FRANCISCO





Same Tank- Same Cleaning Job -but 14 tons less material by using Oakite

AN auto factory has considerably reduced its cleaning costs by using Oakite materials in the removal of tempering oil from cam shafts, wrist pins and other small steel parts before sand blasting.

Formerly used 600 lbs. of sal soda weekly—now use only 60 lbs. of Oakite materials. And they get better cleaning results. The parts are so thoroughly cleaned after immersion in the Oakite solution that it is no longer necessary to depend on the sand blasting to clean up any surface oil.

Of course it is apparent that there is a further saving besides the lower cost of cleaning materials. Time and labor in handling 14 tons during the year—that amounts to something. Then too, only one-tenth as much storage space is required for cleaning materials, or sufficient goods can be ordered at one time to last ten times as long as formerly without increase in storage space.

It pays to use Oakite materials on any kind of a cleaning job. Just how much it will pay you can readily be determined by trying out Oakite on your own cleaning job. That's where an Oakite Service Man can help you. His knowledge and ability as a cleaning specialist is at your disposal—without charge or obligation. Tell us you are interested in saving money on cleaning and we will lose no time in making the saving possible for you.

Oakite Advertising is one of a series based on actual occurrences in the field.

There Are 70 Oakite Service Men, Cleaning Specialists, Located at:
Allentown, Pa.; Atlanta, Ga.; Baltimore, Boston, Bridgeport, Brooklyn, Camden, Canton, O.; Charlotte, N. C.; *Chicago, *Cincinnati, *Cleveland, *Dallas, *Davenport, Dayton, *Denver, *Des Moines, *Detroit, Erie, Flint, Mich.; Grand Rapids, Harrisburg, Hartford, *Indianapolis, *Kansas City, *Los Angeles, *Milwaukee, *Minneapolis, *Montreal, Newark, New Haven, *New York, *Oakland, Cal.; Philadelphia, Pittsburgh, Portland, Me.; Poughkeepsie, Providence, Reading, Rochester, Rockford, Rock Island, *St. Louis, *San Francisco, Schenectady, *Seattle, Syracuse, Toledo, *Toronto, Utica, Waterloo, Ia.; Williamsport, Pa.; Worcester.

*Stocks of Oakite materials are carried in these cities

Oakley Chemical Co. General Offices: 38 Thames St., New York, N.Y.

OAKITE

Trade-Mark Reg. U. S. Pat. Off.

Industrial Cleaning Materials

COUNT THE METROS UP AHEAD

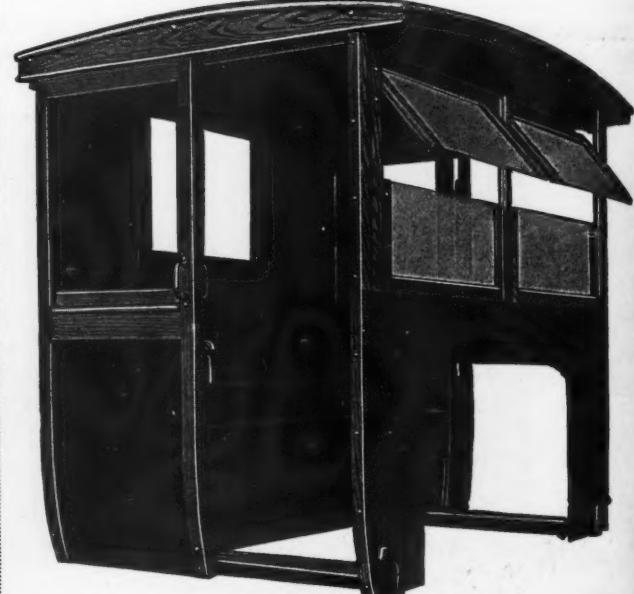
METRO ALL-STEEL OPEN CAB
With Cushioned Windshield



46" AND 52" WIDTHS

THE HEAVY SPRINGS CUSHION AND ABSORB SHOCKS AND STRESSES

METRO ALL-WEATHER CAB
PERFECTED AND PROVED



46"-50"-56" AND 62" INSIDE WIDTHS

SUPERIOR DESIGN—WORKMANSHIP AND MATERIALS

Continuously in Business Since 1909

Local Service Provided

Inquiries Welcomed

**THE METROPOLITAN BODY CO.
BRIDGEPORT, CONN.**

Manufacturers
Combination Dump Bodies, All-Weather Cabs, Open Cabs

New York
Factory Branch:
Third St. and West Ave.
L. I. City



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Factory Branch:
5808 Arch Street

Count the METROS Up Ahead

Oshkosh Four-Wheel Drive Trucks

MODELS AND CAPACITIES

AW 2-ton—BO 2½-ton—F 4-ton

—The Complete 4-Wheel Drive Line—

Why not sell a truck whose performance is your best sales talk? The Oshkosh with power on all four wheels is a guarantee of maximum material delivery per day.

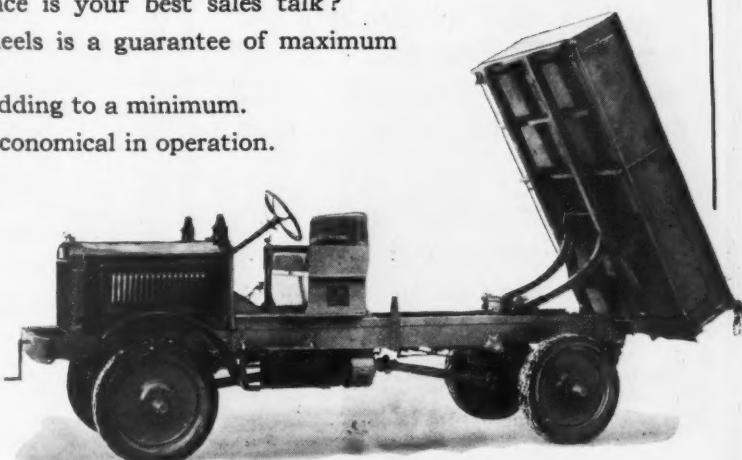
The Oshkosh 4-Wheel Brakes reduce skidding to a minimum.

Simple in construction—easy steering—economical in operation.

Liberal proposition to dealers.

Write Today

**OSHKOSH MOTOR TRUCK
MFG. COMPANY**
OSHKOSH, WIS., U. S. A.



Many truck dealers recommend the glass-lined steel truck tank to their customers who are engaged in the milk business.

They do double service thereby.

Their customers are put in touch with the most up-to-date and modern method of hauling milk, and the truck dealers themselves are given a substantial commission on every actual

Makers of Glass-Lined Steel Truck Tanks
Established 1891 Main Street

Coated-Lined Steel Truck Tanks

Branches in Main Centers

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sale accomplished. Any reliable truck agency has the opportunity of handling the Pfaudler lines. Mail the coupon with your letterhead, for details on our commission arrangement.



THE PFAUDLER CO. 1924
217 Cutler Bldg.
Rochester, N.Y.

Gentlemen: You may send me your new Truck Tank.

Data and Specification arrangement. Manual, explaining your No obligation.

Name _____

Street _____

Town _____

(C. C. J. 3-24)

(C. C. J. 3-24)



Driven to It!

The truck that operates at a low-cost per mile, never does it because you promised the owner it would! Nor just because it's a good truck mechanically.

The low-cost mileage is the truck owner's reward for eternal vigilance at the cost-sheets and mileage records. His return for watching his

Veeder
HUB ODOMETER

He gets his mileage and cost-per-mile from the VEEDER. He gets comparisons on different runs, different days, different drivers.

The best mileage he gets when he first keeps track is the *least* that he gets later on! And you gain by his getting it.

REGULAR MODEL (list) \$20.00
FORD TRUCK MODEL \$15.00

Informative circular on request

The Veeder Mfg. Co.
10 Sargeant Street Hartford, Conn.

Sales and Service Stations in

Atlanta, Ga.
Baltimore, Md.
Boston, Mass.
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Chicago, Ill.
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Tacoma, Wash.
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Washington, D. C.
—and other cities

MOTOR TRANSPORT

Motor Transport is devoted to the development of the art and science of motor transportation as it applies to the transport of commodities by Motor Truck, the transport of passengers by Motor Bus and the transportation of both by Gasoline Railroad Car.

Addressed to the Fleet Owner and those concerned with the operation of fleets—its mission is to analyze all problems which properly come within its scope—and to assist in the solution of these problems by means of editorial discussion.

The six major problems which the Fleet Operator has to contend with in the handling of his fleet, and which Motor Transport helps to solve, are

*Cost of Operation
Problems of Organization
Systems of Operation
Handling Drivers
Maintenance
Legislation*

Each issue of Motor Transport has articles based upon the factors outlined above and these articles are written from first-hand investigations and study by our editors in the field.

Motor Transport is published monthly, on the 10th. The subscription price is \$2.00 per year.

Write for a Sample Copy

MOTOR TRANSPORT

Published by the Chilton Company
Chestnut and 56th Sts. Philadelphia, Pa.

Some Things the Designers of Highland Cabs Omitted

SWINGING DOORS that have to be tied back when open.

CURTAINS that are a constant expense and block the driver's vision.

SLIDING DOORS and curtains that must be all open or all closed.

THE HIGHLAND MODEL D CAB is a universal unit, giving access to the seat from either side, and enabling the driver to change it from a wide-open cab to one partly or completely closed without leaving his seat or stopping his truck.

We have an interesting proposition for the distributor.

THE HIGHLAND BODY MFG. COMPANY
403 Elmwood Place Cincinnati, Ohio



WIDE OPEN



LOTS OF ROOM



COMPLETELY CLOSED

Profit and Satisfaction—

Through the Use of GENUINE KERATOL

GENUINE KERATOL has proven its value as upholstery in the commercial car field.

It is rugged and long-wearing, withstands scuffing and hard knocks, and is easily cleaned.

Combining, as it does, these desirable features, GENUINE KERATOL is rapidly gaining favor with careful buyers and showing them the way to more profits and better satisfaction.

Low initial cost—resistance to wear—no waste in cutting—works up easily—easily cleaned—guaranteed.

The Logical Material—The Ultimate Material

Write for Book of Samples to Dept. C3

The Keratol Co., Newark, N. J., U. S. A.



7

Keratol Features:

Low Initial Cost

Resistance to Wear, Knocks and Scuffing

No Waste in Cutting

Works Up Easily

Beauty of Finish

Unharmed by Gas, Oil or Grease

Guaranteed



No. 108 De Luxe Seat

Highest grade luxurious seat. Deep spring-edge cushion and high spring-edge top back. Designed for type of equipment where special comfort and ease is required. Any covering material desired. Light weight steel pedestal and steel supports for cushion and back.

SEATS FOR EVERY CLASS OF SERVICE
BEST DRIVERS' SEATS

HALE-KILBURN Motor Bus Seats

With thirty years' experience as largest makers of passenger vehicle seats, we can solve your seating problems.

OUR PATENTED Space-Saving Feature

Gives 1½ inches more space for knees of every passenger

WRITE FOR PARTICULARS

HALE-KILBURN COMPANY

General Offices and Works: 1800 Lehigh Avenue, Philadelphia

Sales Offices:

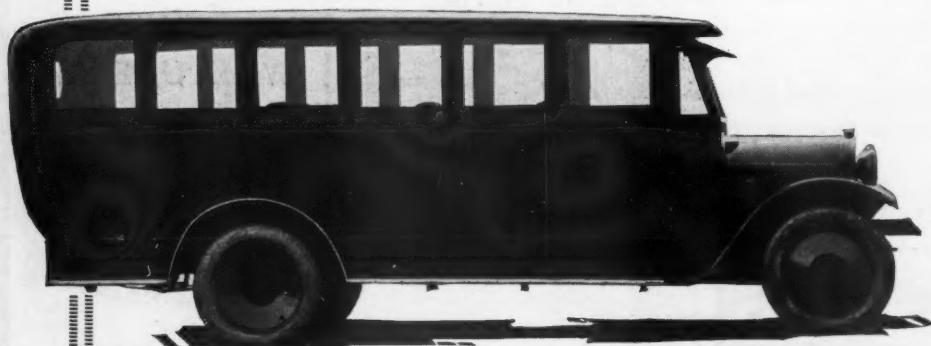
Hale & Kilburn Corp., 30 Church St., New York
Hale & Kilburn Corp., McCormick Bldg., Chicago
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Beauty and Comfort Are Your Customer's Fare Insurance

Their drawing power counts when there's competition to be met. They gain him the bulk of the business during slack hours. They increase the number of pleasure rides on holidays and in the evening. In short, **people like High Class Bodies and when they can, they wait for them.** The beauty and comfort of Weatherproof Bodies insure your customer's profit by creating good will.

They are in use in a score of cities. There are several large fleets making big money.



11 to 25 Passenger Tour-A-Busses 16 and 20 Passenger Sedan Coaches
21 and 25 Passenger Metropolitan Busses

Write and find out what a big value Weatherproof Bodies will let you offer your customers.

Weatherproof Body Corporation

Makers of Bus, Commercial and Passenger Car Bodies, Truck Cabs and Enclosed Tops

Corunna Michigan

HINKLEY

HEAVY DUTY AUTOMOTIVE

ENGINES

For Replacement Purposes

If you are a truck merchandiser, and have the interest of your customers at heart and are willing to accept a profitable means of capitalizing that interest, you should investigate Hinkley Engines for replacement purposes.

The use of Hinkley Engines in all makes of trucks is not a theory, it is an established fact, and you might just as well be getting your share of this business.

Perhaps you imagine the business is difficult and requires a great deal of investment, skill, and technical knowledge. Nothing could be further from the truth.

Under the HINKLEY PLAN the installation of a Hinkley Engine in any one of 150 established models of well-known trucks is a simple matter, requiring only ordinary intelligence and the common garage facilities that any good truck dealer must have.

We have just published a "Replacement Engine Catalog," the only one of its kind ever printed, and your copy is waiting. This book will show how you can profit from this new source of revenue and service, and you have only to write, phone or wire for a copy to be sent you.

It tells about the unlimited engine life franchise which means that selling motor trucks as a profession is taken out of the realm of speculative enterprises, and becomes a dignified, profitable occupation.

Hinkley Engines Are Sold and Serviced in 56 Cities

HINKLEY MOTORS, Inc.
P. O. BOX 839

DETROIT

MICHIGAN



DIXON'S

677

FOR TRANSMISSIONS AND DIFFERENTIALS

An automotive gear lubricant which effectively performs the following vital functions :

1. Lowers friction so that wear on bearings and gears is reduced to a minimum.
2. Resists cold, permitting gears to shift as easily in freezing weather as in mid-summer.
3. Shows minimum temperature rise for bearings and gears.
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5. Smothers the cutting action of road dust and the metal particles chipped off in gear shifting.
6. Insures quietly running gears by providing a film of lubricant between teeth meshing with a minimum clearance.
7. Has long life, i. e., maintains unimpaired the above properties for a long period.

Complete Details of Interest to Engineers Will be Gladly Sent Upon Request

JOSEPH DIXON CRUCIBLE COMPANY

Jersey City, N. J., U. S. A.  Established 1827

MAKERS OF QUALITY LUBRICANTS

For Spur and Bevel Gears Use Dixon's Gear Lubricant No. 677
For Worm Drives Use Dixon's Gear Oil No. 675
For Universal Joints Use Dixon's Grease No. 672



**Here's a
Sturdy
3½ Ton
Adjustable
Truck Jack
FROM**

The BUCKEYE LINE

"The Most Complete Line of Jacks in the World"

A powerful tool, with a wide range of service—housed in a heavy, reinforced malleable casting with a long wide base. Its adjustable foot takes hold a few inches from the ground, or turns over as an extension top. Malleable and high carbon steel construction makes it a jack for long, hard service.

This convenience and quality is typical of Buckeye building. Our line covers all truck demand. Write for catalog today. It will pay you to concentrate on a single reliable line.

***The Buckeye Jack Mfg. Co.
ALLIANCE . OHIO.***

*Adds Years
to the Life of*
**Your Light Delivery
Truck Assembly**

Only in the Columbia Single Reduction Bevel Gear Axle will you find those features of construction that will add years to the life of your light delivery, high-speed truck assembly.

The famous Columbia one-piece housing—pressed from a single piece of steel, and welded once—adds 50% greater torsional strength, *alone*.

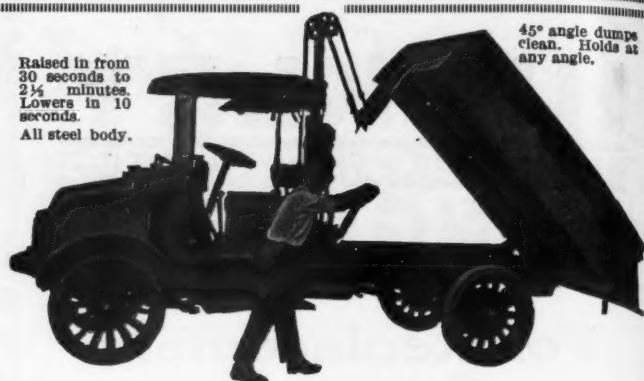
Let us tell you the Columbia story in full. It will pay interested truck manufacturers to write for it to

The Columbia Axle Co. Cleveland, Ohio

**COLUMBIA
S I N G L E
R E D U C T I O N
A X L E S**

Raised in from
30 seconds to
2½ minutes.
Lowers in 10
seconds.
All steel body.

45° angle dump
clean. Holds at
any angle.



**You Can Reach Business
You Couldn't Touch Without
the ARCHER DUMP BODY
and HAND HOIST**

There will always be buyers for this easily operated, dependable and durable hand hoist. Body and hoist together cost no more than a hydraulic hoist alone. Many men won't buy a power-hoist on account of its upkeep. Many have not the capital to put into expensive equipment. In the low-priced truck field, Archer prices decide many truck sales. Write for proposition.

Capacities 1 to 5 tons (1 to 4 yards). Prices, \$225 to \$450, complete. Easily put on.

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Western Avenue and 34th Place
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**Universal Joints
That Give Real Service**

*Electrically Heat Treated Nickel
Steel Tube Makes*

A lighter weight shaft
A greater strength shaft
A non-whipping shaft

Flexible Fabric Disc Joint Means

Cushioned power impulses
Longer life to gears and bearings
Minimum replacement costs
No need of service attention

SNEAD & CO. Jersey City, N. J.



SNEAD
CUSHION DRIVE

"RANGER"

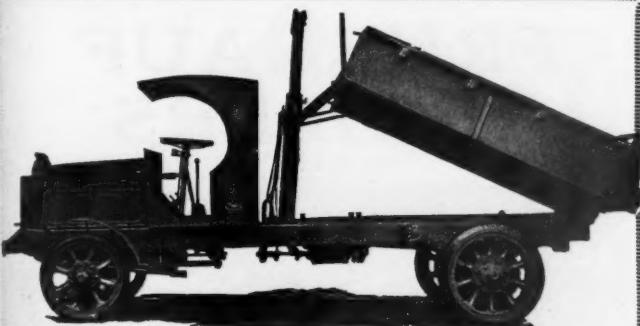
DIETZ LAMPS
DIETZ NEW ACETYLENE
HEADLIGHT FOR MOTOR TRUCKS

DURABILITY, Lighting Power and Good Looks are three essential features of Motor Truck Headlights that reach their most modern development in Dietz Electric and Acetylene Lamps.

R. E. DIETZ COMPANY
60 LAIGHT STREET, NEW YORK
Pioneer Makers of Vehicle Lamps. Founded 1840
JAMES BARNES, Sales Manager Motor Truck Lamp Department, Carter Building, Rochester, New York

"SENTINEL"

DIETZ ELECTRIC HEADLIGHTS
FOR MOTOR TRUCKS



STEWART'S STEEL DUMP BODIES

Built to withstand hard usage. Bodies made to give your truck additional service.

Standard and Special Steel Bodies. Let us quote on your requirements.

THE STEWART IRON WORKS CO.
COVINGTON, KENTUCKY

Manufacturers of

STEEL BODIES CABS
BUMPER RADIATOR GUARDS DASHES



FOUR ACES
BUTLER PRODUCTS



BUTLER AXLES AND THE ACE OF HEARTS ALWAYS WIN

The Ace wins because it's the best in the deck—likewise Butler Axles win because automobile repairmen at home and abroad have discovered that "they win" by using them as Standard Replacements. Butler Axle Shafts are guaranteed to fit—Butler Axle Shafts are ground on all finished surfaces, and tapers within a variation of one-thousandth of an inch—Butler Axle Shafts are hand-straightened in addition to the usual machine straightening—Butler Axle Shafts are made from specially treated Chrome Nickel steel, and are guaranteed free from defect in workmanship or material. Order your Ace of Axles today. Also Nuts and Chrome Nickel keys and key stock.

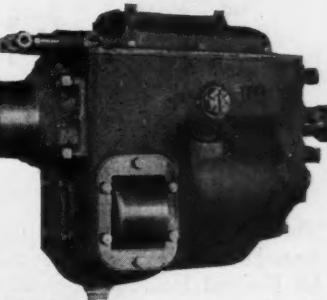
BUTLER AUTOMOTIVE SERVICE CO.
101 M Street
EASTON, PA.

Pride and Profit

induce many truck builders to specify Fuller transmissions and clutches on their product.

A Fuller transmission with twenty years of leadership and success back of it, not only assures satisfactory service but is the deciding factor in many sales.

Profit follows its performance.



UNIT MODELS

SU-2	- - up to 3000 lbs. 3 speeds	GU-8	- - up to 7000 lbs. 4 speeds
SU-3	- - up to 4000 lbs. 3 speeds	GU-10	- - up to 4000 lbs. 4 speeds
GU-7	- - up to 5000 lbs. 4 speeds	HU-1	- - up to 14000 lbs. 4 speeds

TRANS.	CONTROL	CLUTCHES	AMIDSHIP TYPE
LT	LTC	LTU	Up to 2 tons 3 speeds
G-7	HC	GU	Up to 4 tons 4 speeds
H-1	HC	HU	Up to 7 tons 4 speeds

TANDEM INSTALLATIONS

1st Trans. and Clutch	2nd Trans. Amidship
SU-2 or 3	G-7—7 speeds 19-1 total low

GU-7-8 or 10 H-1—8 speeds 30-1 total low

Complete Information on Request

Fuller & Sons Mfg. Co.
Kalamazoo, Michigan

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FULLER Transmissions

The H-W "Tourease"
A Bus-Seat Sensation

In the design and construction of the new H-W "Tourease," ninety-eight years of seat-building experience has been centered. Here is a real bus-seat achievement.

Backs are either 19 or 22 inches high, designed to allow ample knee room without sacrifice of spring depth. Cushions are extra wide and deep, of double spring construction—“comfy” springs over wire-top spring work. As easy as an overstuffed chair. The one-piece frames are unusually sturdy. Pedestal ends have wide-flanged floor castings with double supporting arms welded to full length pressed steel cushion and back supports. Whether or not your “length of haul” demands these extremes of passenger comfort the complete H-W line is certain to contain the seat best suited to your needs. Freely consult our passenger-seating experts on your particular requirements.

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The BENDIX DRIVE

For
Electric
Starters

Automatic
Engaging and
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Standard Equipment
on the Electric
Starters of a Large
Majority of the
World's Motor Cars
and Trucks.

ECLIPSE MACHINE COMPANY
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This is an exclusive feature of Schatz “Universal” Annular Ball Bearings. It is the principle upon which all Federal Bearings operate, and is directly responsible for the great thrust and radial load capacity, the long life, and high efficiency of the

Schatz
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Registered U.S. Pat. Off.
Annular
BALL BEARING

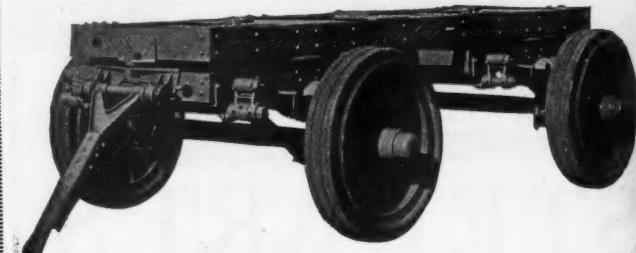
The resulting adaptability has earned for “Universal” Bearings the high regard of foremost engineers everywhere.

The Federal
Bearings Co., Inc.

Poughkeepsie, N. Y.



FRUEHAUF TRAILERS



Repeat Sales—for Big Profits

A sale of one Fruehauf Trailer is usually followed by a repeat order—which is often a fleet sale.

That of course is due to Fruehauf superior design, exclusive features of construction—and immediate sharp lowering of haulage costs.

Fruehauf Trailer Company is one of the largest and oldest trailer concerns in the United States. It has come thru the trying period of the last two years in a financially sound condition. It is growing steadily—and Fruehauf dealers are growing with it.

Write for the Fruehauf list of “Saving-hauling-costs Fleets,” the road-sign to opportunity for the dealer with vision and aggressive sales punch.

FRUEHAUF TRAILER COMPANY
10921 Harper Ave. Detroit, Mich.

Buy from dealers displaying this sign

AUTHORIZED SALES AGENCY
FEDERAL
EXTRA SERVICE TIRES

RIIGHT near you there is an authorized distributor of Federal Tires; a high-class, well-established concern, whose experience is at your service in helping reduce the operating cost of your trucks. Use this service; it will save you money continuously.

The Federal Rubber Company
Chicopee Falls, Mass.

ROCK HAND HOIST

A well-designed and carefully built, simple, practical hand hoist for dump bodies up to 3½ tons capacity.
Cut gears are used on the winch.
Can be mounted on any width of chassis without change.
No holes required in truck frame for mounting hoist.
Occupies but 9" space back of cab.
Dumping angle from 35° to 45°.

PRICE, With Body Hinge, \$85.00
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ROCK MANUFACTURING CO., Waterloo, N. Y.

for Dealing Direct with Dealers

We Help You SELL

Here's a plan for selling Bessemer Trucks that really "rings the bell." It's the squarest deal for dealers you ever saw. You'll say so, too, when you see it. Where shall we send your copy?

Bessemer Motor Truck Company
Motor Truck Division
Bessemer-American Motors Corporation
PHILADELPHIA, PA.
Eleven Successful Years Building Fine Trucks

The Bessemer Tandem Duplex Drive Transmits Power with 97% Efficiency

BESSEMER
MOTOR TRUCKS
The Truck that Made Good in MUD

"NORMA"
PRECISION
BALL BEARINGS

Internationally recognized as the standard bearings for ignition apparatus and lighting generators

THE NORMA COMPANY OF AMERICA
Anable Avenue
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BALL, ROLLER AND THRUST BEARINGS

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Reg. U. S. Pat. Off.
Steel Cabs

Safety
The Doors Swing Freely
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Sheet Steel Products Company
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Plant:
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THE NEW MODEL H



THE PIONEER Gas Velocity Governor

"Limits the Speed and the Expense"

MONARCH GOVERNOR CO.
DETROIT, MICH.

COUNTERBALANCED
PARK
CRANKSHAFTS

Patented July 10, 1917

We have
shipped 146,629
Counterbalanced
Crankshafts up to
March 1, 1924.

THE PARK
DROP FORGE
COMPANY

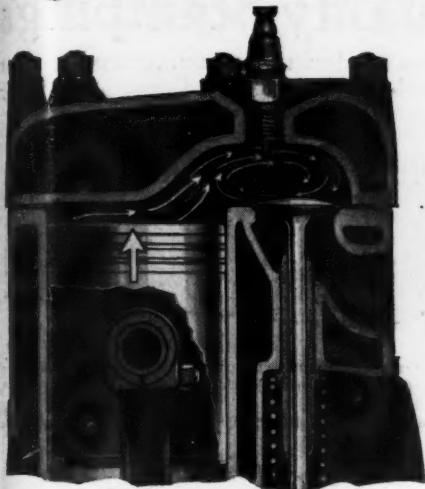
Cleveland, Ohio

WE are often called upon to help motor car and truck builders solve difficult rear axle assembly problems. The readiness with which they have adopted Brown-Lipe-Chapin differentials as a solution is a gratifying tribute to our exacting standards of manufacture.

Manufactured at Syracuse, N. Y.

BROWN-LIPE-CHAPIN
DIFFERENTIALS - BEVEL DRIVE GEARS

The Ricardo Head



Turbulence Accelerates Combustion Just as the Wind Fans the Flames

United States Patent granted Nov. 13, 1923, to Waukesha Motor Company as assignee of Harry Ralph Ricardo, the English scientist.

By increasing the swirl of a more compact gas charge so that it is in a state of high turbulence at the instant of firing, and permitting a more favorable spark location in the combustion chamber, the Ricardo Head produces such promptness and completeness in charge-burning that the power output produced and the economy effected is greater than is obtained from standard types of engines.

Moreover, Ricardo Ell Head engines are purchasable at a relatively lower first cost, and have the further advantages of out-performing other types over a wide range of speeds and loads at less expense.

Ricardo Ell Head engines acquire the utmost consideration of those who seek to obtain more for the motor-purchase-dollar.

All Waukesha Motors are now equipped with the Ricardo Head.

THE WAUKESHA MOTOR COMPANY
Engine Builders
WAUKESHA, WISCONSIN DETROIT

Rowen-Findress
HIGH PRESSURE LUBRICATING SYSTEM
For All Motor Cars and Trucks



A practical and effective system of lubrication for the chassis which satisfactorily meets all requirements and at the same time eliminates all of the objectionable features of the systems now in use.

One hand operates it.

Effectively handles all grades of grease or oil.

Pressure or gravity system.

Convenient to handle, simple to operate.

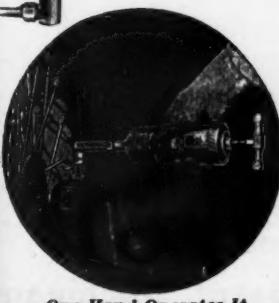
Cleans and lubricates.

Quick. The entire chassis can be lubricated in less than half the time required with any other similar system.

Easily installed. A wrench is the only tool needed.

Write for Descriptive Booklet No. F-302

Bowen Products Corporation
Auburn New York



One Hand Operates It

Reputation!

THE REPUTATION DETROIT TRANSMISSIONS ENJOY AMONG THE BUILDERS OF HIGH GRADE TRUCKS AND BUSSES IS BASED ON THE ESSENTIALS OF A GOOD PRODUCT; QUALITY AND SERVICE. DETROIT GEAR IS JEALOUS OF ITS TRADE NAME. CONSEQUENTLY, DETROIT TRANSMISSIONS GROW IN FAVOR EACH YEAR.

Detroit Gear & Machine Company
Detroit Michigan

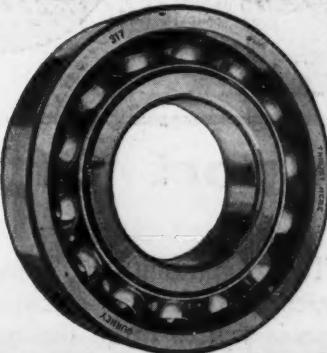


Gurney Ball Bearings Are Better

Their Greater Load Capacity (for their size) than other bearings makes Gurneys best for replacement work.

The new pressed steel separator, recently adopted after years of trial, adds the final touch that places Gurney Bearings in the foremost position.

Let our Engineers assist you
GURNEY BALL BEARING CO.
402 Chandler St., Jamestown, N. Y.



GURNEY
BALL BEARINGS

(18211)



Close Figures on Quality Stampings

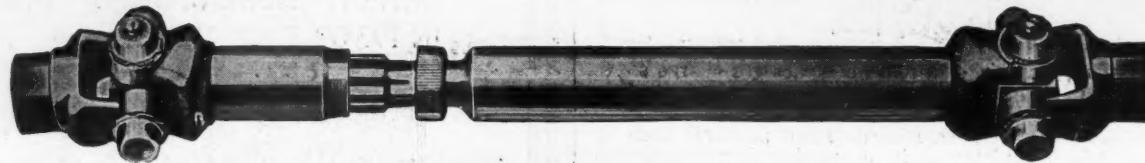
Practically any sheet-metal truck parts you need can be manufactured to your specifications in our well-equipped and well-manned plant. Prices are low for the grade of material and workmanship involved.

Jobbers and Dealers: Our standard lines offer a valuable source of dependable replacement parts for Fords and other popular commercial cars—Fenders for all Ford models, Ford busses and FORDSONS—Radiators, Shells and Honeycomb Cores—Radiator and Running-Board Shields, Tool Boxes, Hood Sills, etc. Write for details.

YORK CORRUGATING COMPANY
YORK, PENNSYLVANIA



"York" Tool Boxes
22" long, 9" wide, 7" deep



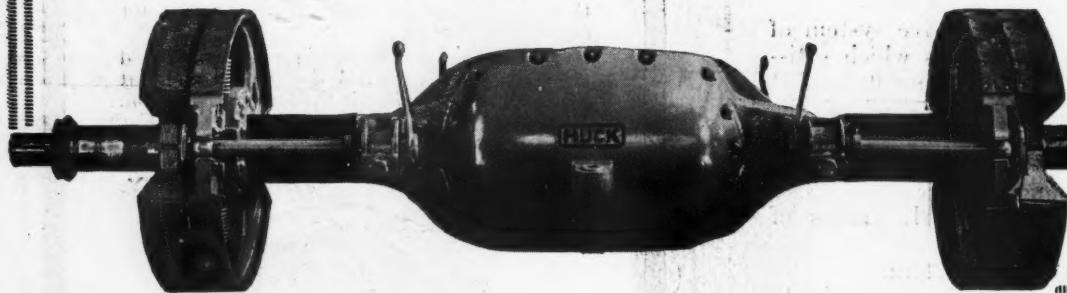
DURABILITY

These joints resist wear because their positive, leak-proof, oil lubrication keeps every part amply supplied—and because their oversize bearings are subjected to from 40% to 100% less pressure per square inch than are the bearings of other joints of the same sizes recommended for the same jobs.

BLOOD-BROTHERS MACHINE COMPANY, ALLEGAN, MICH.

Huck Axle Double Reduction

Note that this easily-accessible, full-floating double-reduction rear axle has an unusually large road clearance; that its self-equalizing brakes insure maximum braking efficiency under severest service conditions; that its central housing contains all working parts—which eliminate wheel and hub complications.



Sizes: 2½ tons to 5 tons; also 35-passenger wide track bus model.

What are YOUR Axle Requirements?

Sheldon Axle & Spring Co.
Huck Axle Division
WILKES-BARRE PA.

Transport Offers Sound Sales Building Opportunity

The adaptability of Transport Models to all kinds of service plus performance records that have established nation-wide recognition of Transport quality prepares you to make the most of the urgent demand for increased transportation facilities manifested in all lines of industry.

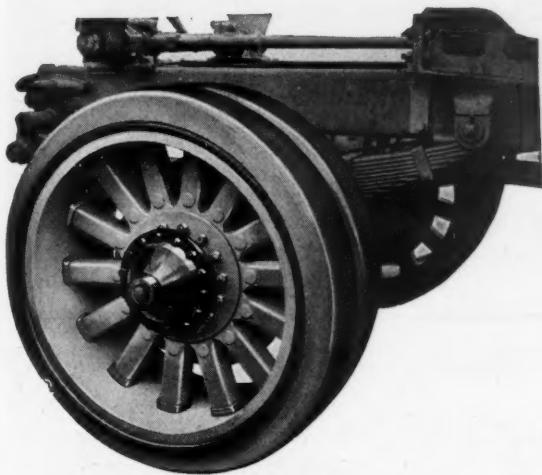
In Transport you sell a truck that appeals to any business man's sense of service and economy. That's why Transport's "Two a Week Club" is growing so rapidly.

Ask for Further Information About This Big Net Profit Opportunity

TRANSPORT TRUCK COMPANY

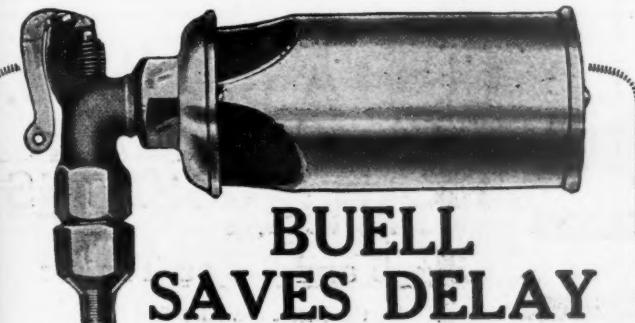
Mt. Pleasant, Michigan

THE HOOPES METAL FELLOE WHEEL



Our Wood Spoke Metal Felloe Wheels which have been on the market for over four years are now standard equipment on several trucks. They are the lightest, cheapest and strongest wheels we know of.

HOOPES, BRO. & DARLINGTON, Inc.
WEST CHESTER, PA.



BUELL SAVES DELAY

Traffic tie-ups are costly. Delay runs up operation expense. Let Buell open the way.

BUELL equipped trucks demand the right of way. The compelling melodious whistle is not to be ignored—that is why the United States mail trucks are BUELL equipped; they HAVE to make time in heavy traffic.

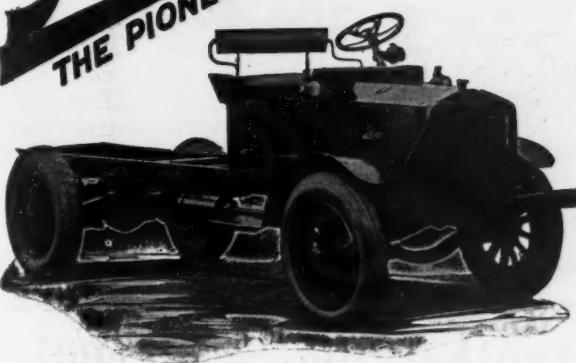
Equip your trucks with a BUELL traffic breaker. If your dealer cannot supply you write to us direct.

BUELL
SIGNALS
WARN EVERY TIME

BUELL MANUFACTURING COMPANY

Cottage Grove Avenue at 30th St., Chicago, Ill.
We Manufacture FLEWELLING Radio Parts
Write for Information

Rowe TRUCKS THE PIONEER



Complete Line Worm-Driven Trucks
3/4 to 6 Ton Capacity

ROWE COMMERCIAL BODIES
BODIES OF UNUSUAL CONSTRUCTION

Valuable Territory Open to Dealers
Write for Catalogue

ROWE MOTOR MANUFACTURING CO.
LANCASTER, PA.

There's a GILLIAM Bearing for practically every application and every location in every make of automotive equipment.

GILLIAM TAPERED ROLLER BEARINGS are interchangeable with other makes of tapered roller bearings.

Ask our nearest distributor or write us direct for our latest Price List and Replacement Size Data.

Cups Cones Rollers
Alloy Steel Throughout

GILLIAM
TAPERED ROLLER
Bearings

Axle manufacturers equipping with Gilliam Tapered Roller Bearings include:

Adams	Clark	Standard
Salisbury	Flint	Equipment
Columbia	U. S.	Wisconsin
Torbensen	Sheldon	Vulcan

THE GILLIAM MFG. CO.

Canton, Ohio

Division Manager and Branch Managers Wanted

One of the oldest established truck manufacturers now has openings for a high grade Division Manager and several Branch Managers. Only men with successful experience and record of accomplishment will be considered. All replies will be held in strict confidence. No inquiry from references will be made until preliminary arrangements have been started.

Address: **TRUCK MANUFACTURER**

Care Commercial Car Journal
Chestnut and 56th Sts., Philadelphia

Another Big Sales Outlet

is provided for your truck if you offer it equipped with the

AMOS LOG LOADER

Attached to your chassis and with only one man to operate it, this remarkable attachment can load 1500 feet of logs in 20 minutes.

Takes its power from the truck itself.

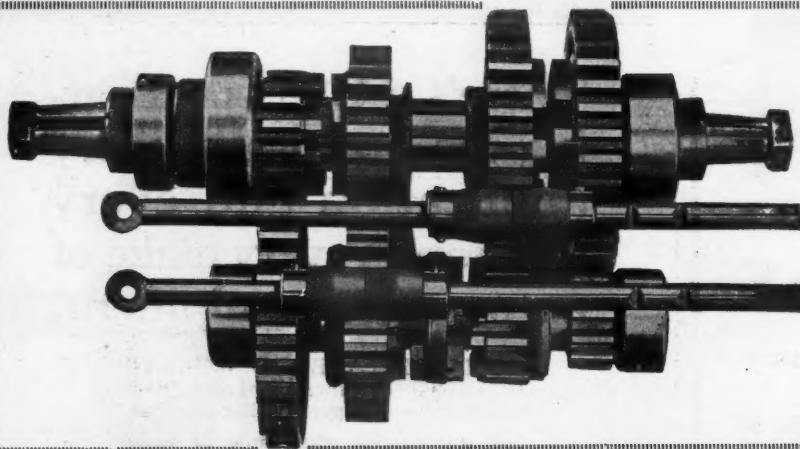
Hardwood timber, plentiful but scattered, requires this Log Loader for profitable handling. Displaces extra men and extra teams.

Equip a truck—display it—show it to lumbermen, handlers of large tanks, heavy machinery, etc. It will bring the profits.

DEALERS:

For Literature and Prices, Write

Amos Loader Company
Edinburg Indiana



COTTA GEAR CO.

INDIVIDUAL CLUTCH TRANSMISSIONS

FOR

3½, 5 and 7 Ton Trucks

Notice the short, compact and husky construction.

Long bearings in the loose gears.

COTTA GEAR CO., Rockford, Ill.

WYMAN-GORDON

The Crankshaft Makers

Worcester Division
WORCESTER, MASS.

Ingalls-Shepard Division
HARVEY, ILL.



74 manufacturers use
Perfex Radiators and
Core Units as standard
equipment

PERFEX for Hard Service

The Bronze-Core Unit construction of Perfex Radiators is the best that can be had for the hardest requirements of motor trucks. Satisfactory cooling is assured under most strenuous conditions, and holding-up qualities assured by the patented Perfex process of shrinking material and lock-seaming joints. These points have been developed by years of experience building quality radiators for heavy-duty service. A model plant is equipped to build to any specifications and maintain schedules. Let us tell you more about our service.

RACINE RADIATOR CO. Racine, Wis.

PERFEX
THE PERFECT RADIATOR.

Repeat Orders Are the Profit Orders

Scores of Day-Elder dealers are annually realizing a fine profit on their investment largely because so many of their sales are made at low selling cost. Resales to satisfied customers cost little to make! You too might share this business.

Write for our dealer proposition.

DAY-ELDER MOTORS CORP.
NEWARK

NEW JERSEY

DAY-ELDER
WORM-DRIVE MOTOR TRUCKS

EATON
AXLES



When a car or truck salesman says "Eaton Axles," or "Perfection Springs," he has pledged more than the ordinary measure of service and satisfaction.

THE EATON AXLE & SPRING CO.

CLEVELAND

PERFECTION
SPRINGS



Everybody's Looking at It!

"What's that little thing up there for?"

"That," said the truck salesman, "is a Servis Recorder. It gives a printed chart that tells you every move your truck makes."

"A check on the driver, eh?"

"Oh, the driver is only a small part of the story. There are all sorts of causes for truck idleness. This Recorder shows all delays from morning till night, and if the truck is taken out during the night, it shows that too."

"I see. Sort of takes the curse off of owning trucks, doesn't it."

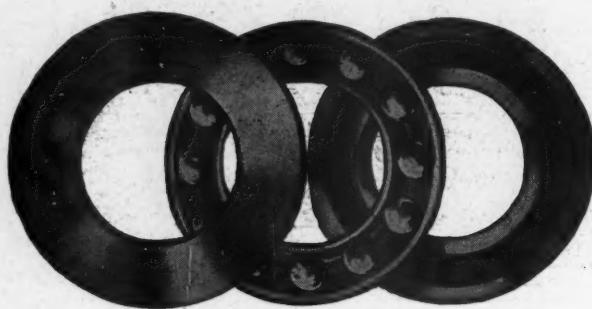
"Yes; now you can supervise your truck right from the top of your desk. There are thousands of truck owners that wouldn't think of operating a truck any more without one."

"Say, that little thing makes me feel more like buying a truck than anything I have seen in a long time."

What better opening could you want?

WRITE FOR BOOKLET

The Service Recorder Co., Cleveland, O.



Western Sales Office
1012 Ford Bldg.
Detroit, Mich.

AJAX PNEUMATIC TRUCK CORD TIRES

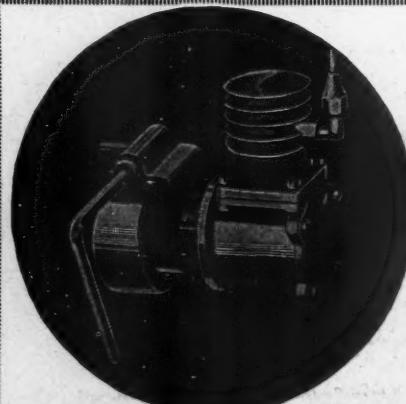
SERVICE and economy in a pneumatic truck tire are dependent upon the enduring qualities built into it. To insure a full measure of endurance, there must be proper balance in materials, construction and design.

Achievement of proper balance in AJAX Cord Tires for motor bus and truck service has been accomplished through long experience and scientific observation of the severest kind of tests.

Motor bus and truck owners are invited to correspond with us on their problems relating to pneumatic cord tires. Make use of this service without obligation.

AJAX RUBBER COMPANY, Inc.
220 W. 57th Street New York City

BRANCHES IN PRINCIPAL CITIES



Only 3 Moving Parts

in the Wizard Pump mechanism. This extreme simplicity and strength combined with materials and workmanship equal to those of a truck engine, make the Wizard Valveless Engine-Driven Tire Pump the ideal equipment for buses and other pneumatic equipped trucks. Your customers will appreciate the Wizard's year in and year out reliability. Its use will make the truck you sell, equipped with pneumatics, a more dependable unit. Write us for details.

Plenty of Pressure
for a 42 x 9

Continental Pneumatic
Equipment Company
8030 S. Chicago Ave.
CHICAGO, ILL.

WIZARD
VALVELESS ENGINE-DRIVEN TIRE PUMP
Fits All Standard Transmissions

THRUST BALL BEARINGS and ANGULAR CONTACT RADIAL BEARINGS made to your requirements and dimensions. STAR BALL RETAINERS for Thrust, Magneto and Cup and Cone Bearings.

The Bearings Company of America
Lancaster, Penna.



USE IT!

The Chilton Symbol is displayed by manufacturers in their advertisements to inform you that they have placed catalog information about their lines in the current issue of the Chilton Automobile Directory. Look for it. Use it by consulting the information to which it refers you. Save time and trouble.

Chilton Automobile Directory (Published Quarterly)

Chestnut and 56th Streets Philadelphia, Pa.





What this trade-mark on a ball-bearing means to you

A STROM trade-mark on a ball bearing means that

- You are getting a bearing which is the first choice of leading engineers in all industries.
- You are getting a bearing which is correctly designed to carry the load and reduce friction to a minimum.
- You are getting a bearing made of special ball bearing steel, heat-treated by the most modern and approved methods (not merely case-hardened).
- You are getting a bearing which is made by skilled workmen in a modern plant and rigidly inspected in every step of its manufacture.
- You have at your disposal—always—all the resources of this great institution devoted solely to manufacturing high-grade ball bearings.

Used "Wherever a Shaft Turns"



U. S. BALL BEARING MFG. CO.
4542 Palmer Street

Chicago, Ill.

The MOTOR That Sells the Truck



Big, clean-cut, business-like, with features on which the whole world has learned to rely—

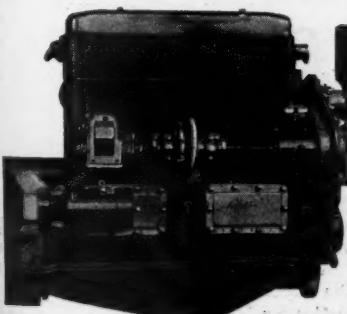
The W.S.M. Engine

not only sells trucks but *in service*, keeps them sold.

With its many features—*sales* features, *service* features, *efficiency* features, call them what you will—it will do all that any motor can do to make a truck, bus or tractor a big success.

Removable Cylinder Walls, Overhead Valves, Positive Governor Control. Pressure Lubrication to all parts of motor, Gear-Driven Fan, etc.

Branches of the factory, with stocks of parts, are now located in important centers.



Write to main office for full details.

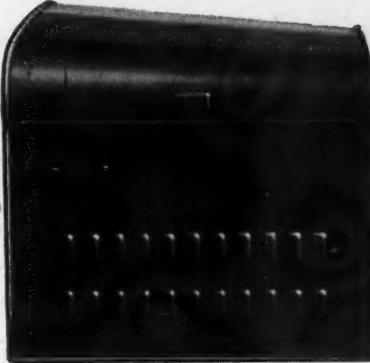
The Wellman-Seaver-Morgan Company

Cleveland Ohio

NEW YORK CITY
522 Fifth Avenue

SAN FRANCISCO
Rialto Building

BIRMINGHAM, ALA.
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Truck Hoods in All Sizes and Styles

We can furnish hoods in all sizes, styles and gauges. And they will be made exactly according to your specifications.

Our exceptionally large assortment of hinge curling, louvre and other dies enables us to meet your individual requirements and at the same time save money in die costs, time and labor.

If you are interested in reducing production costs, write and ask us to estimate on your specifications. *It will pay.*

A.B.&B. SHEET METAL WORKS



Specification
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FOND DU LAC AVENUE AT 33RD ST.
MILWAUKEE



It Identifies Detroit Springs

A raised "D" on every clip bolt head positively identifies genuine Detroit Springs—the springs that are "built to the car makers' specifications." Look for it.

DETROIT STEEL PRODUCTS CO.

2272 East Grand Boulevard

Detroit, Mich.



BUILT TO THE CAR MAKERS' SPECIFICATIONS

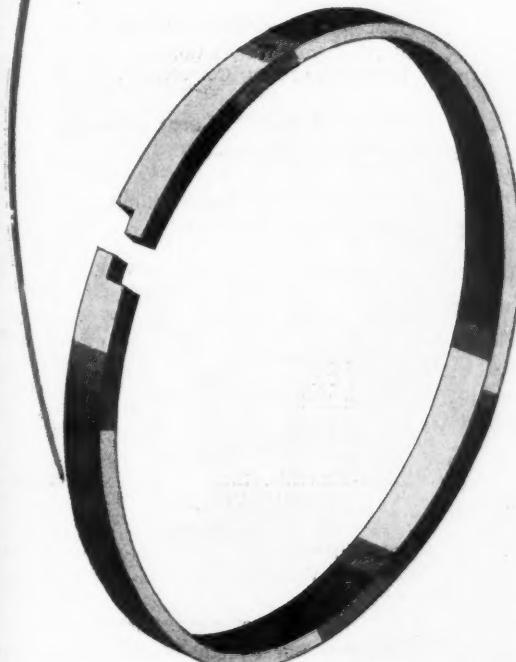
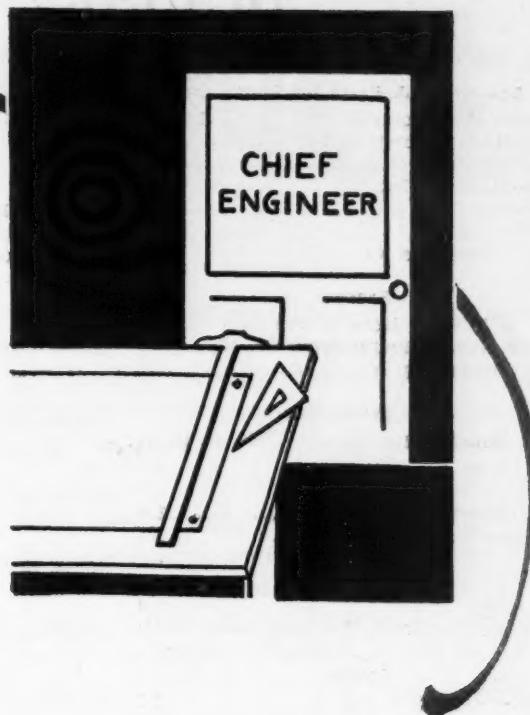
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Ask **HIM**



Ask any leading automotive engineer which piston ring is mostly used for initial installation and the prevalent answer will be **QUALITY**.

QUALITY Piston Rings are accurate, quick seating, long-lived, and easy to install and consequently have been adopted by the engineers of more than one hundred leading manufacturers of automobiles, trucks, and tractors.

Jobbers and dealers who wish to best serve their customers will be guided by the judgment of America's foremost automotive engineers and will stock and recommend **QUALITY** Piston Rings for the replacement trade.

Sold at the common sense list price of 25 cts.

The Piston
RING COMPANY
Muskegon, Michigan

QUALITY

Piston Rings

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PERFORMANCE



Performance is the ultimate test of sound design. In the truck industry, manufacturing standards are high. Utility, service, reliability of performance are factors demanded by an exacting public—absolutely requisite to the final success of any motor truck.

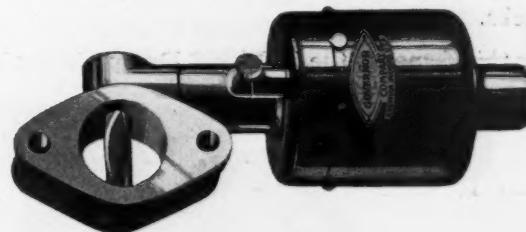
Truck engineers are building PERFORMANCE into their completed jobs and demanding PERFORMANCE of every part which goes into them. Every part adopted as standard equipment must increase the operating efficiency of the truck as a whole, and be itself an efficient unit—sound, by the acid test of PERFORMANCE.

The Pierce Governor meets both conditions. Universally approved for its design and workmanship among the highest engineering authorities, Pierce is today the standard equipment of over one hundred and fifty of America's leading automotive manufacturers. And, in the daily operation of thousands of trucks—all sorts of motors, all sorts of conditions—the Pierce Governor has been found to be a silent but powerful factor in efficient PERFORMANCE.

THE PIERCE GOVERNOR COMPANY

"World's Largest Governor Builders"

Anderson, Indiana



Pierce Governors

"Get the Most from Motors"



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A Monthly Publication

*W*ITH the issue of April 10, Motor Transport will become a monthly publication and will be published in Philadelphia by the Chilton Company, Chestnut and 56th Streets. As a semi-monthly it was published by The Class Journal Company, in New York.

Editorially Motor Transport will continue its highly effective work as an operator's handbook. Helpful solutions of the problems of the fleet owners will be solved by offering the experience of those operators who have met and overcome the difficulties. Specific articles on the operation of motor busses and taxicabs will be included with those of successful freight handling by motor truck, and the scope of the publication will be increased at least to that extent.

The circulation of Motor Transport will be 5,000, guaranteed, starting with April, and will be increased as rapidly as its popularity and usefulness to the operators become recognized.

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Motor Transport

CHESTNUT AND 56th STS.

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APRIL 15, 1924

THE COMMERCIAL CAR JOURNAL

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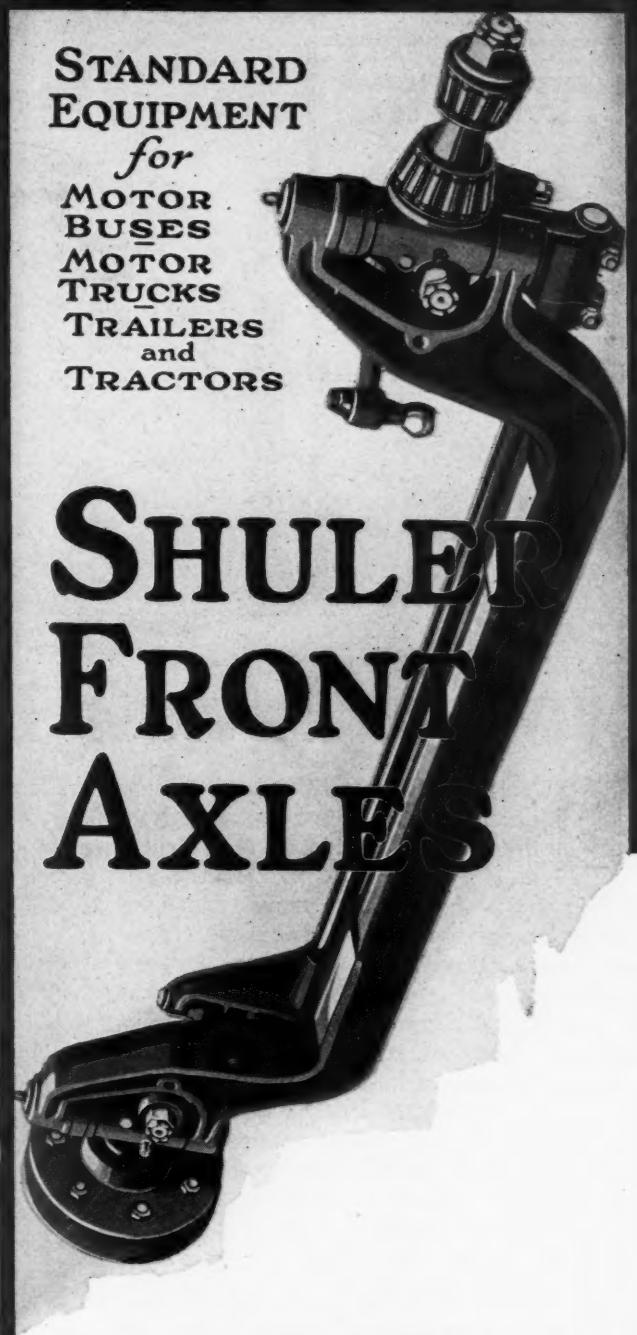
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